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30 OCT – 1 NOV 2026 • Hong Kong



Towards Best Respiratory Health

E-Poster Abstracts

Table of Contents

E-Poster Presentations

- **Location: Level 8 Foyer, Cordis Hong Kong**

E-Poster Abstracts

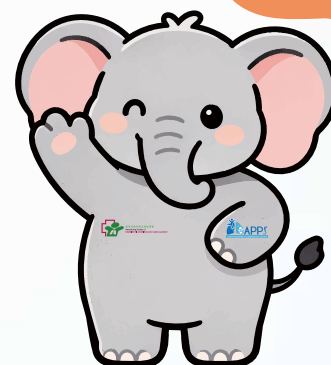
• KIOSK A: PANDA

2	31 October 2026, 11:00 – 11:30
7	31 October 2026, 13:15 – 14:00
14	31 October 2026, 15:15 – 15:45
19	1 November 2026, 10:30 – 11:00
24	1 November 2026, 12:45 – 13:30
29	1 November 2026, 15:15 – 15:45



• KIOSK B: ELEPHANT

35	31 October 2026, 11:00 – 11:30
40	31 October 2026, 13:15 – 14:00
47	31 October 2026, 15:15 – 15:45
52	1 November 2026, 10:30 – 11:00
58	1 November 2026, 12:45 – 13:30
65	1 November 2026, 15:15 – 15:45



• KIOSK C: DOLPHIN

71	31 October 2026, 11:00 – 11:30
76	31 October 2026, 13:15 – 14:00
83	31 October 2026, 15:15 – 15:45
88	1 November 2026, 10:30 – 11:00
93	1 November 2026, 12:45 – 13:30
99	1 November 2026, 15:15 – 15:45



KIOSK A: PANDA



KIOSK A: PANDA

31 October 2026, 11:00 – 11:30

#23

MATHEMATICAL MODELLING IDENTIFIES PROMISING EXTRACELLULAR VESICLE PROTEOMIC BIOMARKERS FOR NON-INVASIVE DIAGNOSIS OF ATOPIC ASTHMA IN SCHOOL-AGE CHILDREN

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Background

Diagnosing asthma in children (<6 years) is challenging, with 25–35% of cases lacking clear evidence, leading to over- and under-diagnosis. Stage-specific biomarkers are needed to predict asthma progression and enable precision treatment. Extracellular vesicles (EVs) from non-invasive nasal fluid are promising for early detection, outperforming free proteins. This proof-of-concept study examines school-age children with confirmed diagnoses.

Methods

The PAECISE cohort recruited 133 school-age children (6–12 years old). In the discovery cohort, 8 atopic asthmatics, 8 non-asthmatic controls, and 4 non-asthmatic allergic children were included. Nasal EVs were isolated by size-exclusion chromatography and ultrafiltration. Proteomics was performed using LC–MS/MS (nanoElute UHPLC–timsTOF Pro 2, DIA). Biomarker candidates were selected using DEP, ROC AUC, PPI, GSEA, logistic regression and LOOCV.

Findings

Proteomics analysis showed that nasal fluid EVs reveal much more biological information than nasal soluble proteins and cells. In nasal fluid EVs of atopic asthma subjects, 48 proteins were upregulated and 39 were downregulated. Mathematical modelling revealed that the abundance of 3 EV proteins, NAT1, CCDC6, S100A6, combined yielded an AUC of 0.938. LOOCV showed high alignment with clinical diagnosis, with an overall error rate of 10%. CTNS abundance correlated with FEV1% across groups, while CCDC6 and CTNA abundances differed marginally between SABA users and non-users among asthmatics.

Conclusions & Future Plans

Nasal EV proteins reflect current asthma status and show promise for predicting progression. Biomarker robustness will be verified in PAECISE cohort (n ≈ 50) using the newly developed ultra-sensitive detection platform using electrochemiluminescence.

KIOSK A: PANDA

31 October 2026, 11:00 – 11:30

#33

DEEP LEARNING-BASED AUTOMATED MEASUREMENT OF ADENOID-NASOPHARYNGEAL RATIO ON LATERAL X-RAYS WITH LLM-ASSISTED REPORT GENERATION

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Adenoid hypertrophy affects a substantial proportion of school-aged children and contributes to sleep-disordered breathing and recurrent infections, creating a large demand for reliable upper airway assessment in routine care. Manual A/N ratio measurement on lateral neck radiographs, however, is slow and prone to inter-observer variation, limiting its scalability in high-volume pediatric ENT clinics. Here, we present an automated system for A/N ratio measurement that integrates deep learning-based image analysis with Large Language Model assisted clinical report generation for adenoid hypertrophy assessment. The system comprises an image analysis module and a report generation module. For image analysis, a U-Net backbone performs keypoint detection on lateral X-ray images to automatically calculate the A/N ratio. We compared traditional Gaussian heatmap regression against sub-pixel integration regression; the traditional heatmap approach achieved superior accuracy, with a Mean Radial Error of $32.84 \text{ px} \pm 25.30 \text{ px}$, outperforming the sub-pixel regression method. For report generation, Llama fuses the quantitative A/N ratio with structured clinical markers, including lung function indicators and inflammatory markers. Using structured prompt engineering and expert-role assignment, the system generated diagnostic reports covering possible diagnoses, severity assessments, and management plans, achieving 90% concordance with expert-reviewed reports across 77 test cases. The inference pipeline was implemented using FastAPI for real-time deployment. These results suggest that combining automated A/N ratio measurement with LLM-assisted report generation offers a feasible and scalable framework for pediatric adenoid hypertrophy screening, providing a practical decision-support tool for pediatric ENT practice, though further validation with larger and prospective clinical cohorts is warranted.

KIOSK A: PANDA

31 October 2026, 11:00 – 11:30

#1

USE OF DIAPHRAGM THICKENING FRACTION AND DIAPHRAGM EXCURSION FOR PREDICTING WEANING SUCCESS IN MECHANICALLY VENTILATED PEDIATRIC PATIENTS: A META-ANALYSIS

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Background/Purpose

To evaluate the predictive value of diaphragm thickening fraction (DTF) and diaphragm excursion (DE) for weaning success in mechanically ventilated pediatric patients.

Methodology

This meta-analysis followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A comprehensive search was performed in PubMed, Scopus, Embase, Cochrane Library, HERDIN, and Web of Science, utilizing specific keywords such as 'diaphragm ultrasound,' 'mechanical ventilation,' and 'pediatric'. Inclusion criteria encompassed studies focused on DTF and DE measurements in pediatric patients aged 1 month to 18 years, published in peer-reviewed English journals up to August 2025.

Results

Twelve studies were included. The overall pooled results indicated that higher DTF and DE were associated with successful weaning (MD=10.03, 95% CI=6.74 to 13.3, p-value=<0.00001 and MD=2.77, 95% CI=1.88 to 3.65, p-value=<0.00001, respectively). The pooled sensitivity of DTF was 0.91 (95%CI=0.86 to 0.94) while specificity was 0.76 (95%CI=0.65 to 0.85). The pooled sensitivity of DE was 0.80 (95%CI=0.67 to 0.88) while specificity was 0.75 (95%CI=0.65 to 0.84). The review of evidence revealed cut-off values of $\geq 24.3\%$ for DTF (AUC=0.985) and $\geq 6.9\text{mm}$ for DE (AUC=0.933) which demonstrated the highest accuracy.

Conclusion

The findings of this meta-analysis suggest that higher DTF and DE are strongly associated with weaning success, emphasizing the importance of evaluating diaphragmatic function to predict weaning outcomes in children. The cut-off with highest reported accuracy for DTF was $\geq 24.3\%$ while for DE, the best cut-off was $\geq 6.9\text{mm}$.

KIOSK A: PANDA

31 October 2026, 11:00 – 11:30

#3

PREVALENCE AND RISK FACTORS FOR UNPLANNED HOSPITAL READMISSION IN CHILDREN RECEIVING INVASIVE HOME MECHANICAL VENTILATION

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Background/Purpose

Children discharged with invasive home mechanical ventilation (HMV) often have complex, chronic conditions and require comprehensive home care. Despite thorough discharge preparation and adequate caregiver training, these children remain at high risk for unexpected acute illnesses that result in unplanned hospital readmissions. This study aimed to determine the prevalence and risk factors for unplanned hospital readmission within 12 months following the first hospital discharge with invasive HMV.

Methods

We conducted a retrospective cohort study of children discharged with invasive HMV whose caregivers had completed a standardized respiratory home care training program at King Chulalongkorn Memorial Hospital between January 2005 and November 2025.

Results

A total of 52 children were included; the median age at discharge was 36 months (IQR 18–120). The leading indications for invasive HMV were neuromuscular diseases (23, 44.2%), impaired control of breathing (14, 26.9%), and lung/airway disorders (12, 23.1%). Within 12 months after first discharge, 33 children (63.5%) had ≥ 1 unplanned respiratory-related readmission. Pneumonia and tracheitis accounted for most readmissions (84.8%). Gastroesophageal reflux disease (GERD) (aOR 7.29, 95% CI 1.16-46.02; $p=0.034$) and peak inspiratory pressure ≥ 15 cmH₂O (aOR 8.75, 95% CI 1.07-71.75; $p=0.043$) were independently associated with 1-year unplanned respiratory-related readmission.

Conclusions

Unplanned respiratory-related readmissions within 12 months after the initial discharge on invasive HMV were common, with pneumonia and tracheitis being the predominant causes. GERD and higher ventilator pressure requirements were independently associated with readmission, suggesting that early identification of high-risk patients and optimizing reflux management may help reduce readmissions.

KIOSK A: PANDA

31 October 2026, 11:00 – 11:30

#6

SEVERE BONE DISEASE IN MIDDLE EASTERN CHILDREN AND ADOLESCENTS WITH CYSTIC FIBROSIS: ASSOCIATIONS WITH VITAMIN D DEFICIENCY AND GENETIC FACTORS

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Introduction

Cystic Fibrosis (CF) related Bone Disease (CFBD) is a significant endocrinopathy in individuals with CF, impacting lung health and long-term prognosis.

Objectives

To determine the prevalence, clinical characteristics, and management outcomes of vitamin D deficiency and CFBD among Omani children with CF, and associations with CFTR genotype.

Methods

A retrospective cross-sectional study January 2018 to December 2023. Children (≤ 18 years) with confirmed CF. Data collected: demographic characteristics, CFTR genotype, vitamin D status, bone mineral density (BMD) assessed by dual-energy X-ray absorptiometry (DXA), pulmonary disease severity, and CFTR modulator use.

Results

Forty-one children and adolescents with CF were included (mean age 9.6 ± 4.7 years). Vitamin D deficiency was observed in 31 patients (75.6%) at some point during follow-up, including 29.0% at the time of CF diagnosis. CFBD, defined as low BMD on DXA, was identified in 9 patients (21.95%), of whom 22.2% were symptomatic with bone pain or fractures. Vitamin D deficiency was present in 77.8% of patients with CFBD. Six of nine patients with CFBD treated with ivacaftor demonstrated improvement and normalization of lumbar spine Z-scores. Persistent severe bone disease was observed in patients with advanced lung disease and additional risk factors.

Conclusion

CFBD and vitamin D deficiency are highly prevalent among Omani children and adolescents with CF. Annual screening using DXA and proactive management of nutritional, pulmonary, and endocrine risk factors are essential. CFTR modulators appear to confer beneficial effects on bone health; however, disease severity and comorbidities may limit response in some patients.

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#5

SANJAD SAKATI SYNDROME AND SLEEP DISORDERED BREATHING AN UNDISCLOSED ASSOCIATION

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Introduction

Sanjad Sakati Syndrome (SSS), is a rare autosomal recessive genetic disorder. It presents with severe intrauterine growth restriction and significant failure to thrive. Presenting symptoms may include tetany, seizures or apneas due to hypocalcaemia secondary to hypoparathyroidism. Distinctive facial features include microcephaly, micrognathia, thin lips with long philtrum and midface hypoplasia. SSS individuals also frequently suffer with sleep related breathing disorder (SRBD).

Aim

We report the clinical manifestation, association with SRBD among children with SSS

Methods

All genetically confirmed diagnosis of SSS from two centers, (SQUH and GOSH) were evaluated. SRBD diagnosis adhered to American Academy of Sleep Medicine criteria. Obstructive Apnea-Hypopnea Index (OAHI), Central Apnea-Hypopnea Index (CAHI), and Oxygen Desaturation Index (ODI). Transcutaneous CO₂ monitoring including duration above 50 mmHg. Echocardiography was conducted to identify pulmonary hypertension.

Results

16 patients with SSS and SRBD were studied (median age 8.87 +/-4.7 years; 10 female). 12 underwent baseline polysomnography. Retromicrognathia was observed in nine, mid-face hypoplasia in seven and hypotonia in three. Severe SRBD was identified in 57.1%, with moderate and mild cases comprising 28.5% and 14.2%, respectively.

Conclusion

Main Findings and recommendations:

- SRBD was seen in all patients. A sleep study should be performed at diagnosis and at regular intervals.
- Most patients required support with mask ventilation (CPAP or BPAP)
- Hypoventilation can be difficult to treat despite use of high BIPAP pressures
- Arnold Chiari malformation type I was identified in patients with central SRBD

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#16

VALIDATION OF TWO TRANSLATED CHINESE SLEEP QUESTIONNAIRES IN DETECTING OBSTRUCTIVE SLEEP APNEA IN PAEDIATRIC PATIENTS IN HONG KONG

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Obstructive sleep apnea is a major health problem in children. The use of valid sleep questionnaires is important to guide the priority of polysomnography. Our study aimed to evaluate the performance of two translated Chinese sleep questionnaires (OSA-5 and modified STOP-BANG), and to assess their validity as a screening tool in the local paediatric population.

A prospective multi-center study was conducted in Queen Elizabeth Hospital and United Christian Hospital in Hong Kong. Patients aged 7 to 18 years old attended between 1st July 2023 and 30th June 2024 for polysomnography were included. The diagnostic performance, internal consistency, test-retest reliability, structural validity and questionnaire validity of the two translated Chinese questionnaires were evaluated.

OSA-5 had a sensitivity of 60.8%, specificity of 44.4%, positive predictive value (PPV) of 86.1% and negative predictive value (NPV) of 16.7%. The Area under receiver operating characteristics curve (AUC) was 0.56 (95% CI 0.38 - 0.73). Meanwhile, modified STOP-BANG showed a higher sensitivity of 82.4%, specificity of 55.6%, PPV of 91.3% and NPV of 35.7%. The AUC was 0.78 (95% CI 0.61 - 0.95). Both questionnaires demonstrated satisfactory structural validity and test-retest reliability. Cronbach's alpha was 0.79 and 0.44 respectively for OSA-5 and modified STOP-BANG.

Translated modified STOP-BANG demonstrated a modest diagnostic performance, reliability and validity, and should be considered as a reliable screening instrument for paediatric OSAS in our local population. On the other hand, our study has concluded that translated OSA-5 is not an accurate tool to detect the presence of OSAS in our population.

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#76

COMPARATIVE ANALYSIS OF OPTIMAL PRESSURE IN POSITIVE AIRWAY PRESSURE THERAPY FOR OSA IN CHILDREN BETWEEN POLYSOMNOGRAPHY-GUIDED TITRATION AND AUTO-CPAP TITRATION

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Background

Continuous positive airway pressure (CPAP) is one of the treatments for obstructive sleep apnea in children. The pressure of CPAP can be determined by polysomnography (PSG) or auto-CPAP titration. This study aimed to compare PSG-guided and auto-CPAP titration pressure to determine the optimal pressure setting and optimal duration of auto-CPAP usage to determine the pressure.

Methods

A prospective cohort study of children aged 5-18 years old with severe OSA between September 2025 and April 2026. They all underwent PSG-guided titration and received a home auto-CPAP titration device for seven days within one month after PAP titration under PSG. Auto-CPAP pressure at $\leq 90\%$ of time (P90APAP) was obtained from the device and compared with pressure guided by PSG (PPSG).

Results

10 participants met the inclusion criteria. The mean age was 11.0 ± 3.1 years, and 80% were obese. The median baseline AHI was 31.6 (22.7-50.6) events/hour. The mean PPSG was 10.6 ± 4.3 cmH₂O. The mean P90APAP of day 1, day 1-3, day 1-5, and day 1-7 was 11.2 ± 2.7 , 10.7 ± 2.6 , 10.7 ± 2.7 , and 10.6 ± 2.8 cmH₂O, respectively. The smallest mean pressure difference between P90APAP and PPSG was 0.06 (95% CI -2.61 to 2.73, p-value 0.96), and the highest concordance coefficient was 0.45 at days 1 to 3.

Conclusions

P90APAP may assist in determining the initial CPAP pressure, but it currently cannot replace PSG titration. Three days are more likely to be effective compared to one night of auto-CPAP titration.

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#11

FLOYD TYPE III TRACHEAL AGENESIS WITH LARYNGEAL CLEFT AND BRONCHIAL SEGMENT ABSENCE: A CASE REPORT

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Introduction

Tracheal agenesis (TA) is a rare, life-threatening congenital anomaly characterized by complete or near-complete absence of the trachea. Floyd Type III, in which both main bronchi arise from the esophagus, represents one of the rarest variants. TA may be associated with other foregut derived malformations such as laryngeal clefts causing aerodigestive tract communication and bronchial hypoplasia or segmental absence, further complicating respiratory function.

Methods

A preterm female neonate with prenatal suspicion of esophageal atresia and cardiac defects underwent postnatal airway assessment via bronchoscopy and CT imaging.

Results

Findings confirmed Floyd Type III TA, an extensive laryngeal cleft, and missing bronchial segments on the left. Complex cardiac anomalies were also present.

Conclusion

This case highlights the importance of early airway imaging and endoscopy in diagnosing major congenital airway malformations and underscores the value of multidisciplinary care in complex neonatal presentations.

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#21

THE BREATH BEHIND THE BALLOON: OPTIMIZING ENDOSCOPIC BALLOON DILATATION IN PAEDIATRIC AIRWAY VIA SOONG'S VENTILATION

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Background

Paediatric Interventional Pulmonology (PIP) has evolved over the last decade, making bronchoscopic balloon dilatation (BD) as a primary or adjunctive therapy for compromised airways. This study evaluates the role and safety of BD in paediatric airway while using Soong's Ventilation to facilitate the whole procedure.

Methods

A retrospective analysis was performed on the electronic medical reports and flexible bronchoscopy (FB) reports over a 3-year period from Jan 2023 till December 2025. All BD interventions were performed via FB using Soong's Ventilation.

Results

A total of 100 balloon dilatation procedures were performed on 49 patients. The cohort consisted of 28 males (57%) and 21 females (43%). The median age at the time of intervention was 4.0 years old (range: 21 days – 29 years), with a median weight of 12.0 kg. BD was most commonly performed in the trachea (43%) and bronchus (35%). Complex multi-level stenosis accounted for 11% of cases. Balloon diameters with size 8mm (33%) being the most frequently used size. Despite total airway occlusion during balloon inflation, Soong's Ventilation effectively maintained saturation with no major complications observed. Technical success was achieved in 78% of the procedures in two attempts.

Conclusion

Our data demonstrates that BD is feasible and effective across the entire respiratory tract. The combination of Soong's Ventilation which ensures continuous ventilation while performing BD. This approach allows us to safely expand the indications for BD, treating complex, multi-level airway narrowing.

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#96

HIGH-PERFORMANCE TRIAGE: LEVERAGING THE PAEDIATRIC SLEEP QUESTIONNAIRE TO SOLVE THE GLOBAL SLEEP CRISIS

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Background

Paediatric obstructive sleep apnea is a significant public health concern, affecting between 1.2% and 5.7% of the general paediatric population. Linked to chronic hypertension, metabolic syndrome, and significant neurocognitive impairment, the condition is increasingly fueled by paediatric obesity trends. While overnight polysomnography remains the diagnostic gold standard, its utility is severely restricted by high costs and limited laboratory availability. This review evaluates the Paediatric Sleep Questionnaire as a high-accuracy, zero-cost instrument for clinical triage.

Methods

This systematic synthesis analyzed data from an umbrella review of five systematic reviews and multiple clinical trials, encompassing a total pool of over 5,900 paediatric subjects. Diagnostic accuracy metrics were benchmarked against PSG-derived indices.

Results

The PSQ demonstrated superior diagnostic performance. For moderate-to-severe disease (AHI>5), sensitivity reached 0.95, making it a definitive tool for ruling out significant illness. Furthermore, In children with obesity, a cut-off of ≥ 0.65 yielded 100% specificity. ROC curve analysis confirmed that the PSQ's accuracy for diagnosing significant OSA is statistically critical ($p \leq 0.001$). Clinical indicators also proved vital; the "assumption of bizarre or abnormal sleep positions" showed an 80% sensitivity for predicting OSA occurrence ($p \leq 0.001$).

Conclusion

While not a surrogate for PSG, the PSQ is a high-yield triage instrument. A score ≥ 0.33 warrants high clinical suspicion, whereas the 100% specificity found at higher cut-offs in obese children allows clinicians to fast-track high-risk patients for immediate intervention in resource-limited settings.

KIOSK A: PANDA

31 October 2026, 13:15 – 14:00

#104

DOSE TRIAL: DOSE OPTIMIZATION OF SALBUTAMOL FOR BRONCHODILATOR RESPONSE IN CHILDREN WITH ASTHMA

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Background/Purpose

Asthma is a chronic respiratory disease marked by reversible airway obstruction, with bronchodilator response to inhaled salbutamol central to its diagnosis and management. Guidelines advise 200–400 mcg salbutamol for BDR testing, but pediatric comparative data for these doses are scarce.

Methods

In this double-blind Randomised controlled trial at a tertiary pediatric chest clinic, 104 children (6–18 yrs) with clinically diagnosed asthma were randomised to receive either 400 mcg (2 puffs salbutamol plus 2 puffs salbutamol) or 200 mcg (2 puffs salbutamol + 2 puffs placebo) via metered-dose inhaler.

Spirometry was performed at baseline and 30 min post-inhalation, measuring FEV₁, FVC, FEV₁/FVC, PEFR, and FEF_{25–75}; BDR was defined as % change in FEV₁ from baseline.

Results

Both groups demonstrated significant spirometric improvement post-bronchodilator, with the 400 mcg group showing a greater median FEV₁ gain than the 200 mcg group (13.5% [IQR 9.2–17.8] vs. 10.0% [IQR 5.0–13.8]; p = 0.039).

Greater improvements in FEV₁/FVC (7% vs. 3%; p = 0.001) and FEF_{25–75} (36% vs. 19.5%; p = 0.015) occurred with 400 mcg, indicating enhanced small-airway reversibility. Positive BDR (>12% FEV₁) was more frequent with 400 mcg (63.4% vs. 40.3%; p = 0.030). Adverse events were mild and comparable.

Conclusions

A salbutamol dose of 400 mcg produces a significantly greater bronchodilator response than 200 mcg in asthmatic children, without increased adverse effects. These findings support the use of the higher dose for bronchodilator response testing to enhance diagnostic sensitivity and guide optimal management of pediatric asthma.

KIOSK A: PANDA

31 October 2026, 15:15 – 15:45

#44

CYSTIC FIBROSIS IN TAIWAN: A 13-YEAR TREATMENT EXPERIENCE AND REASSESSMENT OF DISEASE INCIDENCE.

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Background

Cystic Fibrosis (CF) has been regarded extreme rare in Taiwan; increasing use of genomic testing suggests that its prevalence might be underestimated. We presented our 13-year experience of taking-care our CF patients and try to reassessment CF incidence in Taiwan.

Methods

Eight patients were included, age from 1 month to over 40 years. All patients were managed according to international standards of care. The longest follow-up duration was 13 years. We adopted more proactive bronchoscopic strategies for providing aggressive airway clearance. CF prevalence was evaluated using our genetic databases of 4,356 Taiwanese and Taiwan Biobank.

Results

All patients survive without requiring invasive ventilation. For patient 1, after 10 years of care at our center, demonstrated excellent pulmonary function (FEV1/FVC: 99.7%/97%). In contrast, despite receiving the same treatment strategies, patient 2-5, who were diagnosed later in life failed to achieve similarly favorable outcomes. We have three infant cases (6-8), not yet presenting any respiratory symptoms. The estimated carrier frequency of pathogenic/likely pathogenic CFTR variants might be 1.16% by genetic database. The predicted CF incidence in Taiwan might be approximately 1 in 30,000.

Conclusion

Our findings demonstrate that early diagnosis and timely treatment are critical for long-term outcomes of CF. CF have long been considered extremely rare in Taiwan. It might relate to delayed diagnosis, contributing to unfavorable outcomes. According to our results, the frequency is comparable to the incidence reported in Asian Americans (1:30000). Our study underscores the need for greater awareness of CF in Taiwan.

KIOSK A: PANDA

31 October 2026, 15:15 – 15:45

#46

CORRELATIONS BETWEEN RED BLOOD CELL INDICES AND SEVERITY OF OBSTRUCTIVE SLEEP APNEA SYNDROME IN CHILDREN

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Background

Obstructive sleep apnea (OSA) causes chronic intermittent hypoxia, which may stimulate erythropoiesis, leading to increased hemoglobin (Hb) and hematocrit (HCT). This study investigated the correlation between red blood cell (RBC) indices and OSA severity in children.

Methods

This cross-sectional study was conducted between May 2022 and March 2023. Children aged 2–15 years with habitual snoring (≥ 3 nights/week) who underwent overnight polysomnography (PSG) and complete blood count testing were enrolled. RBC indices, including Hb, HCT, red cell distribution width, mean corpuscular volume, mean corpuscular hemoglobin, and mean corpuscular hemoglobin concentration, were evaluated. OSA severity was classified according to the apnea–hypopnea index (AHI).

Results

Eighty children were included (55% male; median age, 7 years; median body mass index, 20.1 kg/m²). OSA was diagnosed in 58 patients (72.5%), including 29 with mild, 13 with moderate, and 16 with severe disease. No significant correlations were found between RBC indices and AHI, and RBC indices did not differ significantly between children with primary snoring and those with OSA. However, compared with the mild OSA group, children with moderate-to-severe OSA had significantly higher BMI, Hb, and HCT ($p=0.016$, 0.023 , and 0.008 , respectively). Hb ≥ 13.25 g/dL predicted moderate-to-severe OSA with 51.7% sensitivity, 89.7% specificity, and an AUC of 0.703 (95% CI, 0.566–0.839). HCT $\geq 39.25\%$ yielded 51.7% sensitivity, 80.0% specificity, and an AUC of 0.674 (95% CI, 0.535–0.813).

Conclusions

Hb and HCT may serve as simple, inexpensive biomarkers for identifying children at risk of moderate-to-severe OSA and may help prioritize patients awaiting PSG.

KIOSK A: PANDA

31 October 2026, 15:15 – 15:45

#50

OUTCOME OF POST-INFECTIOUS BRONCHIOLITIS OBLITERANS IN CHILDREN FROM A LOW-MIDDLE INCOME COUNTRY: A MULTICENTER REVIEW

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Background/Purpose

Post-infectious bronchiolitis obliterans (PIBO) is a chronic respiratory disease with significant morbidity. We evaluated clinical characteristics and outcomes in children with PIBO with and without bronchiectasis (BE).

Methods

This cross-sectional study recruited patients aged ≤ 18 years with PIBO $\pm$ BE, from two pediatric tertiary centers in Malaysia. Demographics, aetiology, treatment, spirometry, cough scores and parent cough-specific quality of life scores (PCQOL) were collected.

Results

We included 46 patients: 30 with PIBO and 16 with PIBO+BE. Majority were male (63%), with median age at diagnosis of 1.0 years (IQR 1.0–4.0) and symptom-to-diagnosis duration of 12 months (0–144). Viral infection was the leading cause ($n=30$, 65.2%); commonest were adenovirus ($n=16$, 53%) and RSV ($n=10$, 33.3%). The PIBO+BE and PIBO groups had similar weight-for-age z-scores (-1.22 vs -1.00 , $p=0.329$), cough scores (1.00 vs. 0.50 , $p=0.248$), FEV₁ z-scores ($n=15$) [-7.21 vs. -5.42 , $p=0.443$], and PCQOL scores (4.25 vs. 5.00 , $p=0.413$). On serial CT, all PIBO+BE patients showed radiological worsening (9/9, 100%) versus 62.5% in PIBO, with 37.5% of PIBO patients improving. Most (76.1%) received FAM therapy (fluticasone/seretide $\pm$ azithromycin $\pm$ montelukast): 21.7% FAM, 39.1% FA, 10.9% F alone, 4.3% A alone. Children on combined fluticasone and azithromycin (FAM/FA, $n=26$) had lower FEV₁ z-scores (-5.32 vs -3.53 ; $p=0.006$) and higher cough scores (daytime $p=0.028$; night-time $p=0.035$) than those on no or singular therapy ($n=18$), reflecting greater baseline severity. PC-QOL was similar between groups (median 2.00 vs 2.20 ; $p=1.000$).

Conclusion

Larger prospective studies are needed to guide treatment modalities in children with PIBO $\pm$ BE.

KIOSK A: PANDA

31 October 2026, 15:15 – 15:45

#54

RIGHT PULMONARY APLASIA IN A NEONATE WITH ANORECTAL MALFORMATION: DIAGNOSTIC PRECISION AND SUBSPECIALTY MANAGEMENT

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Background

Unilateral pulmonary aplasia is an extremely rare congenital anomaly characterized by a rudimentary mainstem bronchial stump with complete absence of distal lung parenchyma and pulmonary vasculature. It frequently co-occurs within the VACTERL association spectrum. Identifying this condition early is critical to optimize airway clearance and prevent misdirected medical therapy.

Case Presentation

A term male newborn presented with respiratory distress and meconium per urethra from an imperforate anus with recto-urethral fistula, requiring an emergency colostomy. 2D echocardiography showed isolated cardiac dextroposition. Due to recurrent extubation failures and persistent complete opacity of the right hemithorax, chest CT scan was performed, revealing total absence of right lung parenchyma and vessels with left upper lobe consolidation. Flexible bronchoscopy (2.8 mm) confirmed a narrowed, tapering right mainstem bronchus that arrested scope progression, with no lobar or segmental orifices visualized. Renal ultrasound was normal. The diagnosis of right pulmonary aplasia was established. Management was transitioned from empiric bronchodilators to 3% hypertonic saline nebulization and targeted chest physiotherapy.

Conclusion

Combining CT scan and flexible bronchoscopy establishes airway anatomy safely without risking stump perforation. Diagnosing pulmonary aplasia directs single-lung protective ventilation during upcoming staged surgical repairs and establishes long-term surveillance for pulmonary hypertension and thoracic deformities.

KIOSK A: PANDA

31 October 2026, 15:15 – 15:45

#55

MULTIPLE GIANT PULMONARY BULLAE IN AN ADOLESCENT: A DIAGNOSTIC DILEMMA BETWEEN NECROTIZING PNEUMONIA AND PULMONARY TUBERCULOSIS

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Background

Multiple giant pulmonary bullae are rare in adolescents. Determining the underlying etiology may be challenging because clinical, radiological, microbiological, and pathological findings are often discordant, particularly when differentiating necrotizing pneumonia from pulmonary tuberculosis (TB).

Case Description

A 16-year-4-month-old boy presented with progressive dyspnea, one week of hemoptysis, three weeks of fever, and a 7-kg weight loss over one month. Physical examination revealed tachypnea, decreased breath sounds over the left hemithorax, and bilateral fine crackles. Chest radiography and computed tomography demonstrated multiple giant left pulmonary bullae with extensive destructive lung changes, raising the differential diagnoses of necrotizing pneumonia, pulmonary TB, pneumatocele, and lung abscess. Tuberculin skin testing and Xpert MTB/RIF were negative, whereas sputum PCR detected high loads of *Staphylococcus aureus* and *Haemophilus influenzae*. Despite antimicrobial therapy, the patient developed progressive pyopneumothorax requiring video-assisted thoracoscopic surgery, which was converted to thoracotomy because of extensive pleural adhesions and a destroyed left lower lobe, necessitating decortication and left lower lobectomy. Pleural fluid cytology subsequently demonstrated granulomatous inflammation with acute inflammatory reaction, prompting reconsideration of pulmonary TB despite negative microbiological investigations. Empirical anti-tuberculous therapy was initiated while repeat molecular testing was undertaken. The patient was successfully extubated, supported with non-invasive ventilation, and showed gradual clinical improvement.

Conclusion

This case highlights the diagnostic complexity of multiple giant pulmonary bullae presenting with features suggestive of both necrotizing pneumonia and pulmonary TB. Continuous diagnostic reassessment integrating clinical, radiological, microbiological, pathological, and intraoperative findings is essential to guide management when diagnostic findings remain discordant.

KIOSK A: PANDA

1 November 2026, 10:30 – 11:00

#93

PREVALENCE OF OROFACIAL MYOFUNCTIONAL DISORDERS (OMD) IN PAEDIATRIC OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS)

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Background

Paediatric obstructive sleep apnea syndrome (OSAS) is often attributed to tonsils and adenoid hypertrophy. Increasing evidence showed that orofacial myofunctional disorders (OMD) are often associated with OSAS. In this study, the prevalence and types of OMD in paediatric OSAS were reported.

Methods

This was a retrospective study of children with OSAS referred for orofacial myofunctional therapy (OMT) from November 2025 to June 2026. The myofunctional assessment data, sleep PSG result and demographic data were retrieved.

Results

Ten children (aged 4–14, 8 male) with OSAS were assessed. Mean AHI was 10.6 (range: 1.5-52) with six mild, one moderate and three severe OSAS. Mean BMI was 17.5 (range: 12.9-24.4) with one underweight and three overweight children. All were confirmed to have orofacial myofunctional disorders as follow:

Impaired oral musculature functions:

- Restricted tongue movement (90%, n=9/10)
- Tongue weakness in 4 of 8 children (1 overweight); 4 without tongue weakness (2 overweight)
- Lip weakness (100%, n=7/7)

Narrower upper airway anatomy:

- High and narrow palatal vault (100%, n=10/10)
- Malocclusion (90%, n=9/10): teeth crowding (n=2); over bite (n=5); open bite (n=1) ; Class I malocclusion (n=5); Class II malocclusion (n=4)
- Mallampati scores 3 or 4 (70%, n=7/10)

Discussion

Paediatric OSAS is a heterogeneous disorder. Orofacial myofunctional examination is important to identify those with oral musculature deficits for myofunctional therapy, an essential step to long-term cure and hopefully preventing adult OSAS.

Conclusion

OMD are identified in all paediatric OSAS in the current case series. OMT is indicated for these patients.

KIOSK A: PANDA

1 November 2026, 10:30 – 11:00

#95

AN INTERIM SOLUTION: LEVEL 4 PORTABLE OXIMETRY FOR DETECTION OF PAEDIATRIC OBSTRUCTIVE SLEEP APNOEA IN A RESOURCE-LIMITED SRI LANKAN SETTING

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Background

Polysomnography remains the gold standard for diagnosing paediatric obstructive sleep apnoea (OSA), but high costs and limited availability severely restrict access in low- and middle-income settings. Level 4 portable pulse oximetry offers a practical, scalable interim diagnostic alternative.

Objectives: To evaluate the diagnostic utility of Level 4 portable oximetry for paediatric OSA and to assess associations between clinical findings, Sleep-Related Breathing Disorder Paediatric Sleep Questionnaire (SRBD-PSQ) scores, and oximetry parameters.

Methods

This cohort study enrolled 52 children with suspected sleep-disordered breathing in Galle, Sri Lanka (male-to-female ratio 1:1; age range 4 months–15 years; mean age 8 years; 50% with underlying syndromes). Participants underwent clinical evaluation, SRBD-PSQ assessment, early morning blood gas analysis, and overnight continuous pulse oximetry. Recordings were evaluated for signal quality and desaturation indices.

Results

Half of the cohort (51.0%) screened positive on the SRBD-PSQ (mean score 0.27). Adequate-quality oximetry data were captured in 77% of studies (mean duration 6 hours). OSA was identified in 58.1% of interpretable studies, predominantly presenting as mild disease (37.3%). No significant correlations were observed between clinical assessment scores, SRBD-PSQ results, and objective oximetry parameters. Oximetry-guided clinical management encompassing clinical monitoring, weight reduction, non-invasive ventilation, and surgical referral yielded clear physiological and clinical improvements on follow-up testing in treated patients.

Conclusions

Level 4 portable oximetry demonstrates meaningful, practical diagnostic utility for paediatric OSA in resource-constrained environments. It represents a feasible interim solution to expand diagnostic capacity and streamline timely care across Asian healthcare systems.

KIOSK A: PANDA

1 November 2026, 10:30 – 11:00

#148

WHICH LATERAL NECK RADIOGRAPHIC MEASUREMENTS BEST REFLECT OBSTRUCTIVE SLEEP APNEA SEVERITY IN CHILDREN?

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Background

Adenotonsillar hypertrophy is the most common cause of obstructive sleep apnea (OSA) in children. Lateral neck radiography is widely available, but relationships between radiographic measurements and OSA severity remain unclear.

Objective

To determine which lateral neck radiographic measurements best reflect OSA severity based on polysomnography (PSG) and surgically excised adenoid and tonsil volumes.

Methods

This retrospective cross-sectional study included children aged 2–18 years with suspected OSA who underwent lateral neck radiography and PSG within 1 year. A pediatric radiologist evaluated seven adenoid and three tonsillar measurement methods. Measurements were correlated with obstructive apnea-hypopnea index (oAHI) and nadir SpO₂. Adenoid and tonsillar measurements were also correlated with their respective surgically excised tissue volumes.

Results

Among 165 children (mean age, 7.99 ± 2.84 years; 72% male; mean oAHI, 20.39 ± 22.40 events/h), 56% had severe OSA. The air column/soft palate (AC/SP) ratio was the only measurement significantly correlated with both oAHI ($r = -0.157$, $p = 0.043$) and nadir SpO₂ ($r = 0.183$, $p = 0.018$). No tonsillar measurement correlated significantly with PSG parameters. Associations were observed mainly in younger and non-obese children. Among 73 children undergoing adenotonsillectomy, AC/SP correlated with adenoid volume ($r = 0.34$, $p = 0.003$), while visual tonsil grading was associated with tonsil volume after adjustment ($p = 0.010$).

Conclusion

Most lateral neck radiographic measurements showed weak or no correlations with PSG measures of OSA severity. The AC/SP ratio showed the best overall association with PSG severity and adenoid volume, particularly in younger, non-obese children. Visual tonsil grading was associated with tonsil volume but not PSG severity. Lateral neck radiography may provide supplementary information but cannot replace PSG for determining OSA severity.

KIOSK A: PANDA

1 November 2026, 10:30 – 11:00

#78

ONE NUTRIENT OR MANY? TARGETED VERSUS BROAD-SPECTRUM MICRONUTRIENT SUPPLEMENTATION IN CHILDHOOD ASTHMA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

Asthma is the commonest chronic childhood disease, with high micronutrient insufficiency prevalence. Multi-ingredient supplements are based on the premise that more nutrients confer broader protection, yet this has not been tested against single-nutrient repletion.

Methods

A PRISMA 2020-compliant systematic review and meta-analysis of RCTs in children with asthma. Fourteen outcomes analysed. Risk of bias with RoB 2. Effects pooled using random-effects models; heterogeneity with I^2 ; subgroups: deficiency-targeted versus untargeted, daily versus bolus, single versus multi-nutrient.

Results

Twenty-two RCTs (2,411 children) were analysed. Exacerbation risk: RR 0.73 (95% CI 0.53-1.00; $I^2=50.7\%$). Deficiency-targeted repletion: RR 0.64 (95% CI 0.46-0.91; $I^2=35.1\%$); untargeted: RR 1.09 (95% CI 0.75-1.59); p for interaction=0.042. Zinc improved symptoms and spirometry; magnesium improved bronchial response. No multi-nutrient formulation outperformed single nutrients. Safety was excellent (OR 0.97; 95% CI 0.86-1.07).

Conclusions

A single nutrient, chosen because it is measurably deficient and replaced at a physiological daily dose, reduces asthma exacerbation risk by approximately one third. Adding more nutrients does not add benefit. Clinical practice should favour measure-then-replace over broad-spectrum supplementation.

KIOSK A: PANDA

1 November 2026, 10:30 – 11:00

#79

FROM AN APPARENT THYMIC CYST TO MULTISYSTEM DISEASE: THE EVOLVING IMAGING PHENOTYPE OF SUSPECTED GENERALIZED LYMPHATIC ANOMALY

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Background

Generalized lymphatic anomaly (GLA) is a rare complex lymphatic disorder involving multiple organs. Thoracic involvement may mimic mediastinal tumors or infiltrative diseases. We report a child with longitudinal imaging demonstrating evolution from an apparently localized mediastinal cystic lesion in infancy to extensive thoracic and systemic lymphatic disease.

Case Presentation

A female child was prenatally noted to have an anterior mediastinal cystic lesion. Postnatal CT demonstrated a small cystic lesion within an enlarged thymus, initially considered a thymic cyst or thymic hyperplasia. Serial ultrasonography showed near-complete regression by 9 months. She remained clinically well until 3 years of age, when chest radiography obtained during bronchitis unexpectedly demonstrated mediastinal widening. CT revealed an extensive infiltrative mediastinal lesion encasing major mediastinal structures without significant compression, bilateral interlobular septal and peribronchovascular abnormalities, and multiple splenic lesions. MRI demonstrated a 9.4-cm multiloculated T2-hyperintense trans-spatial lesion involving the mediastinum and cervical regions, with pulmonary and splenic involvement, most consistent with GLA.

Discussion

Serial multimodality imaging illustrates the evolution of this complex lymphatic disorder. Mediastinal infiltration encasing rather than compressing vessels and airways, together with pulmonary interstitial and splenic involvement, strongly supports a complex lymphatic anomaly. However, distinction among GLA and other complex lymphatic anomalies remains provisional without histopathologic, molecular, or lymphatic-flow confirmation.

Conclusion

Complex lymphatic anomalies may evolve despite apparent regression of an early cystic lesion. Recognition of characteristic imaging patterns may facilitate diagnosis, while management in clinically stable children should be guided by clinical phenotype and disease trajectory rather than radiological burden alone.

KIOSK A: PANDA

1 November 2026, 12:45 – 13:30

#124

TOO LATE TO REVERSE? REFRACTORY BOOP AFTER AUTOLOGOUS HSCT IN A CHILD WITH ATRT

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Background

As survival improves for atypical teratoid/rhabdoid tumor (AT/RT), long-term complications require recognition. We report a 2-year-old girl who developed refractory bronchiolitis obliterans organizing pneumonia (BOOP) after treatment.

Case Presentation

A 2-year-old girl with brain AT/RT underwent tumor resection, chemotherapy, and autologous hematopoietic stem cell transplantation (HSCT). She developed respiratory failure 1 year after treatment. She had gastroesophageal reflux (GER) and multiple previous episodes of infective pneumonia. Restrictive lung physiology was noted, with ventilator peak inspiratory pressures up to 40 cm H₂O required to achieve tidal volumes of 5 mL/kg. Thoracic high-resolution computed tomography showed bilateral ground-glass opacities, interlobular septal thickening, and increased parenchymal density. BOOP was diagnosed, and high-dose methylprednisolone (MP) was initiated. Her condition continued to deteriorate. Second-line therapies, including intravenous immunoglobulin (IVIG) and mycophenolate mofetil (MMF), were added, followed by pulse methylprednisolone, tocilizumab, and ruxolitinib. Despite maximal medical management, respiratory failure persisted, and she died on day 45.

Discussion

BOOP is a rare lung disease that may be associated with GER, respiratory infections, and HSCT. Although most cases respond to corticosteroids, a minority follow a rapidly progressive, steroid-refractory course with limited treatment options. MMF, IVIG, ruxolitinib, and tocilizumab have been reported for refractory BOOP; however, our patient showed no response.

Conclusion

This case highlights the need for further research to guide treatment strategies for refractory BOOP.

KIOSK A: PANDA

1 November 2026, 12:45 – 13:30

#126

DIFFICULT INTUBATION MADE EASIER FOR PAEDIATRICIANS — 3-3-2, MALLAMPATI, LEMON, OR NIMO?

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Background

The Mallampati score and the LEMON approach are commonly used to predict difficult intubation in adults. However, children have unique anatomical and physiological differences across age groups. These adult-based tools do not fully address paediatric variations, making airway assessment more challenging for paediatric providers.

Method

A comprehensive literature search was conducted using the PubMed database, focusing on English-language, peer-reviewed articles.

Results

The Mallampati score/Modified Mallampati Test evaluates only the oral cavity. Its accuracy may vary depending on tongue protrusion and phonation. It also requires patient cooperation and is not suitable for comatose or critically ill patients requiring urgent intubation.

LEMON stands for Look externally, Evaluate 3-3-2, Mallampati score, Obstruction, and Neck mobility. Although comprehensive, it may be difficult to recall and less practical during emergency resuscitation.

We propose a simplified acronym: NIMO. In NIMO, N represents neck rigidity, limited neck flexibility, and/or cervical spine injury; I represents inter-incisor distance; M represents mouth examination using the familiar Mallampati approach; and O reminds clinicians to assess for oropharyngeal obstruction, such as a hematoma, foreign body, or mass. The sequence progresses from external to internal assessment and is designed to be comprehensive and easy to recall.

Conclusion

NIMO simplifies overlapping airway assessment protocols and may help paediatric providers rapidly identify potential difficult airways in acute care settings.

KIOSK A: PANDA

1 November 2026, 12:45 – 13:30

#151

COMBINED DIAPHRAGM AND LUNG ULTRASOUND DURING A 15-MINUTE SPONTANEOUS BREATHING TRIAL PREDICTS EXTUBATION FAILURE IN CRITICALLY ILL CHILDREN

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Background

Extubation failure in critically ill children leads to significant morbidity. Although short duration spontaneous breathing trials (SBT) are widely used, clinical parameter monitoring during an SBT may miss occult respiratory muscle exhaustion. We investigated whether dynamic changes in diaphragmatic thickening fraction (DTF) combined with lung ultrasound score (LUS) during a brief 15 minute T-piece SBT could unmask latent respiratory failure and predict extubation outcomes in pediatric patients.

Methods

In this retrospective observational study, 65 mechanically ventilated children in a tertiary PICU who successfully passed a 15-minute T-piece SBT were analyzed. Diaphragm ultrasound (DTF) at baseline, 5 min, 15 min, and 1-day post-extubation, alongside LUS, were measured. Extubation failure was defined as reintubation within 48 hours.

Results

Overall, 55 patients (84.6%) were successfully extubated, while 10 (15.4%) experienced extubation failure. Baseline diaphragmatic thickness and 5-minute DTF did not differ between groups. However, at the 15-minute mark of the SBT, the success group demonstrated significantly higher DTF ($19.63 \pm 10.90\%$ vs. $4.67 \pm 16.39\%$, $P < 0.001$) and lower LUS (8.75 ± 5.33 vs. 14.33 ± 5.22 , $P = 0.012$). Multivariable logistic regression identified 15-minute DTF (OR = 0.87, 95% CI: 0.78–0.98, $P = 0.026$) and LUS (OR = 1.22, 95% CI: 1.01–1.46, $P = 0.035$) as independent predictors. Integrating both indices in a combined "pump-and-load" model yielded superior predictive performance (AUC = 0.88, 95% CI: 0.765–0.992) compared to either modality alone.

Conclusions

A 15-minute T-piece SBT acts as a dynamic physiological stress test. Combining 15 minute DTF with LUS effectively unmasks occult diaphragmatic fatigue and parenchymal strain in children passing clinical SBT criteria, providing a robust bedside evaluation prior to extubation.

KIOSK A: PANDA

1 November 2026, 12:45 – 13:30

#80

CLINICAL PROFILE AND OUTCOME OF CONSOLIDATIVE PNEUMONIA GIVEN PNEUMOCOCCAL CONJUGATE VACCINE BOOSTER DOSE AMONG CHILDREN ADMITTED IN A TERTIARY HOSPITAL

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Background

Pediatric community-acquired pneumonia remains a leading cause of hospitalization in children. Pneumococcal conjugate vaccine (PCV) protects against *Streptococcus pneumoniae*, the most common bacterial pathogen. Immunity wanes over time but a booster dose leads to a longer-term protection. This study determined and compared the clinical profile and outcomes of children with consolidative pneumonia according to PCV booster dose status.

Methods

This retrospective analytical cross-sectional study included children 1 to 18 years old with consolidative pneumonia admitted in a private tertiary hospital in Davao City from 2022-2025. Pearson's Chi-square or Fisher's exact tests were used to compare the demographic and clinical profiles and outcomes. Logistic regression analysis identified factors associated with receipt of a PCV booster dose.

Results

Among 146 children, majority (69.20%) received only the primary 3-dose PCV series while a smaller proportion (30.80%) received a booster dose. There were no significant differences in terms of demographic profile, signs and symptoms, comorbidities, previous pneumonia-related hospitalization, severity, morbidity, radiographic complications, duration of hospitalization, or mortality. Only stunting was associated with receipt of a booster dose (OR 6.188, 95% CI 1.153–33.214, $p=0.034$).

Conclusion

Most hospitalized children with consolidative pneumonia had not received a PCV booster dose, a finding consistent with the preventive role of booster immunization. However, among those who already developed consolidative pneumonia, receipt of a booster dose was not associated with differences in clinical profile or outcomes. The association between stunting and receipt of a booster dose should be interpreted as an observational association rather than evidence of causality.

KIOSK A: PANDA

1 November 2026, 12:45 – 13:30

#81

SPECTRUM OF PULMONARY MANIFESTATIONS IN CHILDREN WITH INBORN ERRORS OF IMMUNITY: AN OBSERVATIONAL LONGITUDINAL STUDY FROM BANGLADESH

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Background

Pulmonary involvement is one of the most common and significant manifestations of inborn errors of immunity (IEI), often resulting in recurrent infections, structural lung damage, and delayed diagnosis. Data regarding pulmonary complications of IEI from resource-limited settings are limited. This study describes spectrum of pulmonary involvement among children with IEI.

Methods

This observational longitudinal study was conducted at Ad-din Medical College Hospital, Dhaka, Bangladesh, from September, 2022 to August, 2024. Children suspected of having IEI were evaluated based on clinical and immunological criteria. Whole exome sequencing (WES) was performed in 50 eligible cases. Respiratory manifestations, radiological findings, microbiological profile, and genetic diagnoses were analyzed.

Results

Male-to-female ratio was 1.6:1 and parental consanguinity present in 30% cases. The mean age at diagnosis was 29±39 months, diagnostic delay was 21±33 months. Most common respiratory manifestations were recurrent pneumonia (66%), recurrent wheeze (60%), persistent pneumonia (24%), recurrent otitis media (20%), and bronchiectasis (12%). Radiological abnormalities- consolidation (56%), hyperinflation (28%), ground-glass opacities (26%), multifocal patchy opacities (22%), and bronchiectasis (14%). Respiratory pathogens identified- Mycobacterium tuberculosis, Staphylococcus aureus, Streptococcus pneumoniae, Haemophilus influenzae, Pseudomonas spp., Klebsiella, adenovirus, and Mycoplasma. WES identified pathogenic/likely pathogenic variants in 32% of tested patients. Genetically confirmed IEIs included severe combined immunodeficiency, X-linked agammaglobulinemia, chronic granulomatous disease, Mendelian susceptibility to mycobacterial disease, bare lymphocyte syndrome, Wiskott–Aldrich syndrome, and congenital neutropenia.

Conclusion

Pulmonary manifestations are frequent and diverse among children with IEI and may be the initial clue to diagnosis.

KIOSK A: PANDA

1 November 2026, 15:15 – 15:45

#112

THE BURDEN OF PARAPNEUMONIC EFFUSION IN CHILDREN: CLINICAL CHARACTERISTICS, MANAGEMENT, AND MORTALITY

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Background

Parapneumonic effusion is a serious complication of childhood pneumonia associated with substantial morbidity and mortality. Data on pediatric parapneumonic effusion in Indonesia remain limited. This study described clinical characteristics, comorbidities, management, and factors associated with in-hospital mortality.

Methods

This retrospective cohort study included children hospitalized with PPE at an Indonesian tertiary referral hospital. Demographic characteristics, underlying comorbidities, management, and outcomes were extracted from medical records. Survivors and non-survivors were compared using the Mann–Whitney U and Fisher's exact tests. Multivariable logistic regression identified factors independently associated with mortality.

Results

Among 67 children, 41 (61.2%) were male and 13 (19.4%) died. Underlying comorbidities were present in 57 (85.1%), while 10 (14.9%) had no identified comorbidity. Mortality was 21.1% (12/57) among children with comorbidities versus 10.0% (1/10) without comorbidities ($p=0.673$). Pleural drainage was performed in 57 (85.1%), and 30 (44.8%) underwent surgical decortication; no patients received intrapleural fibrinolytic therapy. Older age was associated with mortality in univariate analysis ($p=0.003$). In multivariable analysis, older age remained independently associated with mortality (adjusted OR 1.22 per year, 95% CI 1.06–1.40; $p=0.007$), whereas sex and underlying comorbidity were not.

Conclusions

Pediatric parapneumonic effusion in one of tertiary referral hospital in Indonesia was characterized by a high burden of comorbidity, frequent invasive pleural intervention, and substantial mortality. Although mortality was numerically higher among children with comorbidities, the difference was not significant. Older age was independently associated with increased in-hospital mortality.

Keywords

parapneumonic pleural effusion; children; Indonesia; comorbidity; mortality; pleural drainage.

KIOSK A: PANDA

1 November 2026, 15:15 – 15:45

#114

CLINICAL AND BRONCHOSCOPIC CHARACTERISTICS OF ENDOBRONCHIAL TUBERCULOSIS

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Background

Tuberculosis remaining a major global health problem, and Indonesia ranks second worldwide in total TB burden. Endobronchial tuberculosis (EBTB), infection of the tracheobronchial mucosa, is an underrecognized form of pediatric TB that is frequently missed on initial clinical and radiographic assessment and confirmed only through bronchoscopy. This study aimed to describe the clinical characteristics of children with EBTB diagnosed by flexible bronchoscopy at RSAB Harapan Kita during 2021–2024.

Methods

This retrospective descriptive study used secondary data from bronchoscopy registers and medical records of children diagnosed with EBTB at RSAB Harapan Kita between 2021 and 2024.

Results

Seven children were diagnosed with EBTB. Most were female (57.1%), with an average patient age of under 5 years old. Chronic cough was the most common presenting symptom (71.4%), followed by stridor and hemoptysis. Growth or nutritional impairment was documented in all of cases, and *Mycobacterium tuberculosis* was confirmed in all patients. The right bronchial tree was the most frequently involved site (57.1%), followed by the left bronchial tree and distal trachea. Actively caseating was the most common bronchoscopic subtype were found. Diagnosing endobronchial tuberculosis is quite challenging. In one instance, a patient was referred with suspected laryngomalacia, but we found yellow cheesy material in the bronchus, leading to be diagnosis of EBTB.

Conclusion

Endobronchial tuberculosis sometimes presents with nonspecific respiratory symptoms, which can lead to a delay diagnosis. Bronchoscopy in suspected cases is crucial for accurate diagnosis and appropriate management

KIOSK A: PANDA

1 November 2026, 15:15 – 15:45

#115

A RARE CASE OF INFANTILE SUBGLOTTIC HEMANGIOMA

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Background

Subglottic hemangioma is a rare type of infantile hemangioma with a prevalence of 1.76 cases per 100,000 live births, typically presents with inspiratory or biphasic stridor exacerbated by feeding or upper respiratory tract infections. The condition is frequently misdiagnosed as croup or laryngomalacia. We report a case of a three-month-old infant presenting with respiratory distress who was subsequently diagnosed with and treated for subglottic hemangioma.

Methods

Data were obtained from the patient's electronic medical records.

Case Report

A three-month-old female infant was referred to our hospital with complaints of coughing, noisy breathing and fast breathing for 3 days. She had a history of similar symptoms at one month of age, at which time she was diagnosed with pneumonia and treated in the intensive care unit with mechanical ventilation. On presentation, she was afebrile, tachypneic with biphasic stridor, and hemangioma was presented on her neck. Bronchoscopy revealed a reddish lesion causing subglottic narrowing, suggested subglottic hemangioma. MRI of the neck also support the diagnose. The patient was treated with propranolol, intravenous dexamethasone, and bleomycin. She was discharged on the third day of admission as her symptoms improved. Follow-up bronchoscopy one month later demonstrated a reduction in lesion size and corresponding clinical improvement.

Conclusion

Infants with recurrent respiratory distress, various differential diagnoses must be considered. Even though subglottic hemangioma is a rare disease, it should be included in the differential diagnosis for infants with a history of recurrent respiratory distress and biphasic stridor.

KIOSK A: PANDA

1 November 2026, 15:15 – 15:45

#117

EXPERIENCES OF ACCESSING TUBERCULOSIS CARE ON SAILUS ISLAND, A REMOTE ISLAND IN SOUTH SULAWESI, INDONESIA: A QUALITATIVE STUDY

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Background

Tuberculosis (TB) remains a public health concern in remote island communities, where access to healthcare may be limited. This study explored experiences of accessing TB care in a remote island community in South Sulawesi, Indonesia.

Methods

A descriptive qualitative study was conducted on Sailus Island, Pangkep Regency, South Sulawesi, Indonesia. Thirty participants were purposively recruited through the Ksatria Airlangga Floating Hospital, comprising 8 patients, 8 family caregivers, and 14 healthcare providers and community health workers. Data were collected through in-depth interviews and analyzed thematically.

Results

Three themes were generated: challenges in recognizing and accessing TB care, psychosocial experiences of living with TB, and community-based support for continuity of care. Patients described prolonged cough, followed by evaluation at primary healthcare facilities and referral for further investigations. Limited local services required some patients to travel by sea to other islands, incurring transportation and living expenses. Patients also reported concerns about treatment side effects and social exclusion following diagnosis. Caregivers described anxiety regarding TB transmission and difficulties supporting older patients with medication adherence. Healthcare providers reported challenges related to sea transportation and adverse weather affecting specimen transportation, diagnostic testing, and referrals. Community worker and healthcare providers supported medication distribution, home visits, treatment reminders, education, screening, and preventive treatment for eligible children.

Conclusion

Access to TB care on remote islands is shaped by challenges in recognition, diagnosis, transportation, treatment, and social support. Strengthening local services and community-based support, alongside reliable referral and transportation systems, may improve access to and continuity of TB care.

KIOSK A: PANDA

1 November 2026, 15:15 – 15:45

#118

IS THE INDONESIAN PEDIATRIC TUBERCULOSIS SCORING SYSTEM STILL RELEVANT COMPARED TO THE 2022 WHO DIAGNOSTIC FRAMEWORK? A RETROSPECTIVE STUDY

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Background

Indonesia has the second highest tuberculosis (TB) burden globally. In 2024, there are 135.000 TB cases in children, and 14 deaths per minutes in all TB cases globally, showing the urgency of appropriate early detection. This study analyze the relevancy of using Indonesia TB scoring system (by Indonesia Pediatric Society in 2000) compared to the framework of diagnosing lung TB with bacteriological confirmation based on WHO guideline in 2022, given that the majority of the primary healthcare centers in Indonesia still lack of bacteriological confirmation facilities.

Methods

This retrospective cohort study included 102 presumptive TB children (aged ≤ 18 years old) in child health department of Dr. Soetomo General Hospital in January - December 2025. The data described descriptively, then analyzed using Chi square, McNemar's test, and Cohen's Kappa to compare TB scoring and bacteriological confirmation.

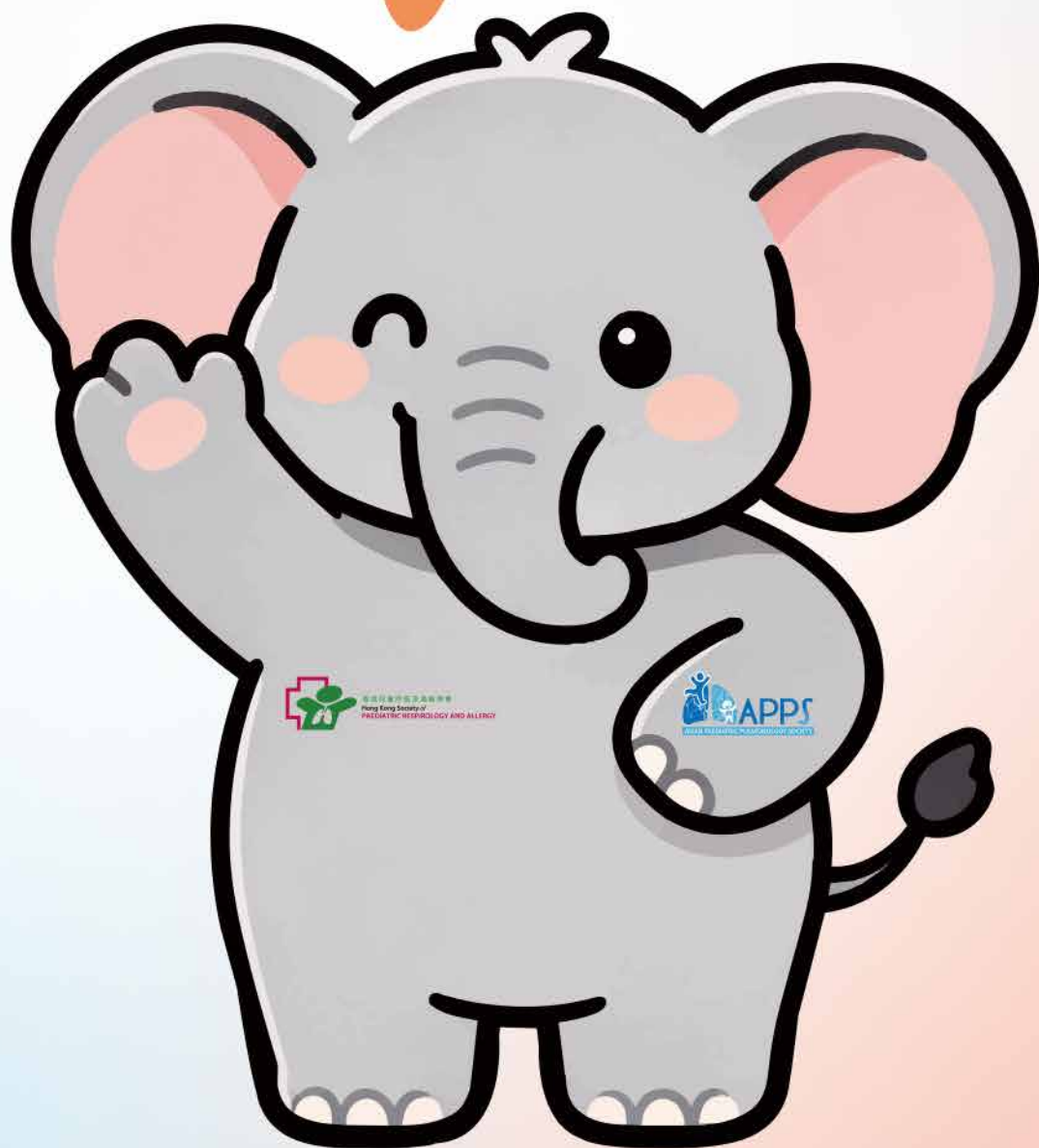
Results

The result of comparing Indonesia TB scoring test with bacteriological confirmation was 16.6 % true positive, 9.8 % false positive, 33.3% false negative, and 40% true negative. As for the sensitivity was 33.3%, specificity 80.4%, PPV 63%, NPV 54.1%, and accuracy 56.9%. Chi square resulted $p=0.116$, while McNemar's test was significant ($p<0.001$), and Cohen's Kappa $k=0.14$.

Conclusion

There was no statistically significant association between TB scoring results and bacteriological confirmation, but the high specificity, the low sensitivity, and mcNemar's result showed that TB scoring can still serve as an alternative for early diagnosis, particularly at healthcare centers that do not yet have bacteriological confirmation facility, not as the replacement of bacteriological confirmation.

KIOSK B: ELEPHANT



KIOSK B: ELEPHANT

31 October 2026, 11:00 – 11:30

#26

SURVIVING THE AIRWAY: OUTCOMES AND RISK PROFILE OF PEDIATRIC TRACHEOSTOMY PATIENTS IN PADANG, INDONESIA

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Background

Tracheostomy is a widely performed procedure for securing and maintaining a patent airway in critically ill pediatric patients, especially patients requiring prolonged mechanical ventilation. Understanding its risk profile and outcomes are essential for optimizing perioperative management and reducing mortality.

Objective

To characterize the risk profile and outcomes of pediatric patients who underwent tracheostomy at RSUP Dr. M. Djamil Padang, a tertiary referral hospital in Indonesia.

Methods

A descriptive retrospective study was conducted on pediatric patients who underwent tracheostomy at PICU Dr. M. Djamil hospital, between 2024 and 2026, in Padang Indonesia. We analyzed variables including sex, age group, nutritional status, underlying disease, ventilator dependency, and clinical outcome.

Results

During 2 years, we recorded 72 patients underwent tracheostomy, at our hospital. Most patients were male (66.7%), predominantly in the 1-11 years old group (44.4%), and the respiratory tract infection was the leading underlying disease (47,2%). Majority of nutritional status was well-nourished in 41.7%, severely malnourished in 31.9%, and moderately malnourished in 26.4% of patients. Ventilator dependency was present in 73.6% of cases, and the survival rate was 68.1%, with a mortality rate of 31.9%. The most significant risk factor for outcome were age and nutritional status.

Conclusion

This study highlights a broad clinical spectrum of pediatric tracheostomy at a tertiary hospital in Indonesia, predominantly good outcome affected by age and nutritional status.

Keywords

tracheostomy; clinical profile; pediatric; outcome; nutritional status

KIOSK B: ELEPHANT

31 October 2026, 11:00 – 11:30

#41

COMPARATIVE OUTCOMES BETWEEN HYDROCORTISONE-ASCORBIC ACID-THIAMINE ADDITIONAL COMBINATION THERAPY AND STANDARD TREATMENT IN PEDIATRIC SEPTIC SHOCK

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Background/Purpose

To compare the duration of vasoactive drug use between HAT therapy and standard treatment in children with septic shock. In addition, to evaluate differences in changes in the pediatric Sequential Organ Failure Assessment (p-SOFA) score, lactate clearance, length of pediatric intensive care unit (PICU) stay, and mortality.

Methods

This ambidirectional cohort study compared patients who received HAT therapy with those who received standard treatment. The HAT therapy group received an intravenous combination of hydrocortisone, ascorbic acid, and thiamine and was enrolled prospectively between May 2023 and February 2024. The control group consisted of retrospectively identified patients treated between March 2022 and April 2023. Medical records were reviewed to collect demographic characteristics, sources of infection, laboratory findings, treatments, and clinical outcomes.

Results

The study included 46 patients, with 23 patients in each group. Baseline characteristics and laboratory findings were comparable between the groups. The duration of vasoactive drug use was shorter in the HAT therapy group than in the control group (38 hours [IQR, 29–63] vs. 46.5 hours [IQR, 36–65.8]); however, the difference was not statistically significant ($p = 0.249$). Likewise, there were no significant differences in changes in the p-SOFA score, lactate clearance, or length of PICU stay. Kaplan–Meier survival analysis also demonstrated no significant difference in 30-day survival between the two groups.

Conclusions

HAT therapy did not significantly reduce the duration of vasoactive drug use compared with standard treatment. Furthermore, no significant differences were observed in 30-day survival, length of PICU stay, or other clinical outcomes.

KIOSK B: ELEPHANT

31 October 2026, 11:00 – 11:30

#45

CORRELATION OF PCO₂ GAP, LACTATE, STANDARD BASE EXCESS, AND CORRECTED ANION GAP IN PEDIATRIC SEPTIC SHOCK

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Background

Pediatric septic shock is a major cause of morbidity and mortality. Although lactate is widely used to monitor resuscitation, relationships among PCO₂ gap, lactate, standard base excess (SBE), and corrected anion gap (cAG) after resuscitation remain unclear.

Objective

To evaluate correlations among PCO₂ gap, lactate, standard base excess (SBE), and corrected anion gap (cAG) after achieving therapeutic endpoints in pediatric septic shock, and associations with mortality and organ dysfunction.

Methods

In this prospective observational study, children aged 1 month to 18 years with septic shock admitted to the PICU were enrolled. PCO₂ gap, lactate, SBE, and cAG were measured at baseline, 6, 12, and 24 hours, and after achieving therapeutic endpoints. Correlations among biomarkers and associations with mortality and organ dysfunction were analyzed.

Results

Forty-four patients were enrolled, with an 11.3% mortality rate. After achieving therapeutic endpoints, lactate correlated positively with PCO₂ gap ($r = 0.403$, $p = 0.013$), whereas SBE correlated inversely with cAG ($r = -0.599$, $p < 0.001$). A PCO₂ gap ≥ 6.1 mmHg predicted lactate ≥ 2 mmol/L (AUC = 0.712), and an SBE ≤ -5.5 mmol/L predicted cAG ≥ 16 mEq/L (AUC = 0.772). Serial lactate levels were higher in non-survivors, and 24-hour lactate independently predicted mortality. Lactate and cAG were independently associated with the 24-hour PELOD-2 score.

Conclusion

After achieving therapeutic endpoints, PCO₂ gap correlated with lactate, whereas SBE inversely correlated with cAG. 24-hour lactate was the strongest predictor of mortality and organ dysfunction. PCO₂ gap and SBE may complement lactate and cAG in monitoring resuscitation.

KIOSK B: ELEPHANT

31 October 2026, 11:00 – 11:30

#27

CHILDHOOD-TO-ADULTHOOD LUNG FUNCTION TRAJECTORIES IN POST-INFECTIOUS BRONCHIOLITIS OBLITERANS AND THEIR ASSOCIATION WITH CHILDHOOD GROWTH

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Background/Purpose

Post-infectious bronchiolitis obliterans (PIBO) causes fixed airflow limitation in childhood, but long-term outcomes and their early correlates remain poorly defined. We examined whether lung function normalizes by adulthood and explored childhood factors associated with adult outcome.

Methods

In a single-centre cohort, spirometry (GLI z-scores) at childhood (~10 years) and adulthood (~22 years) was analysed in patients with paired measurements (n=38). We assessed cross-sectional adult status, paired childhood-to-adult change, and principal-component-based k-means trajectory clustering. Associations of baseline factors (sex, childhood FEV1 z-score, childhood height-for-age z-score [WHO 2007]) with a composite adult outcome (first principal component) and with trajectory type were examined by linear and multinomial regression.

Results

At adulthood, FVC reached the normal range in 75%, whereas FEV1 (30%) and FEV1/FVC (25%) largely did not. From childhood to adulthood, FVC improved (mean z-change +0.79, p<0.001), FEV1 was unchanged (p=0.27), and FEV1/FVC declined (-0.64, p<0.001). Clustering identified three trajectory prototypes along a continuum: severe-persistent (n=15), catch-up improvers (n=10), and mild-preserved (n=13). Childhood height z-score was the only baseline factor independently associated with composite adult lung function (β =+0.44, p=0.041; model R^2 =0.22, p=0.034); childhood FEV1 showed a borderline association (p=0.09). Childhood FEV1 mainly reflected baseline severity, whereas the catch-up group had higher childhood height.

Conclusions

In this PIBO cohort, lung volume recovered by adulthood while airflow limitation persisted or progressed. Beyond baseline airflow, childhood growth was associated with a more favourable long-term trajectory, a possible link warranting confirmation in larger studies.

KIOSK B: ELEPHANT

31 October 2026, 11:00 – 11:30

#30

PAEDIATRIC PULMONARY MPO-ANCA VASCULITIS: A CASE SERIES

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Background

Antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) is a rare, life-threatening small-vessel vasculitis in children. Pulmonary involvement, particularly diffuse alveolar haemorrhage (DAH), frequently coexists with rapidly progressive glomerulonephritis (pulmonary-renal syndrome). Early diagnosis is challenging because non-specific respiratory symptoms often mimic endemic infections in tropical regions.

Case Series

We describe three female patients aged 5–12 years with myeloperoxidase (MPO)-positive p-ANCA vasculitis managed at a tertiary centre in Sabah, Malaysia, following an average diagnostic delay of 4 weeks due to initial suspicion of bronchopneumonia. All patients presented with severe anaemia (haemoglobin 3.3–6.5 g/dL) with reticulocytosis, respiratory symptoms (cough, dyspnoea, haemoptysis), and acute kidney injury requiring immediate haemodialysis in two patients. Chest radiographs confirmed DAH, and lung biopsy in one patient demonstrated extensive haemosiderin-laden macrophages with interstitial fibrosis. Two patients required mechanical ventilation and plasmapheresis. Renal biopsy in one patient showed focal crescentic necrotising glomerulonephritis. All patients achieved complete pulmonary remission following induction with 12 cycles of intravenous pulse methylprednisolone and cyclophosphamide, maintained on Mycophenolate Mofetil. However, two patients progressed to end-stage kidney disease at the initial presentation.

Conclusion

In regions endemic for infectious diseases, a high index of suspicion is required for paediatric MPO-ANCA vasculitis when presenting with the triad of acute respiratory symptoms, severe anaemia with reticulocytosis, and acute kidney injury. Immediate ANCA serology testing and aggressive immunosuppression are vital to rescue pulmonary function, though long-term renal morbidity remains high.

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#49

WHEN TUBERCULOSIS HIDES IN THE BRAIN: MULTIPLE CEREBRAL TUBERCULOMAS IN A CHILD

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Background

Central nervous system tuberculosis the most severe forms of extrapulmonary tuberculosis and manifested as tuberculous meningitis, abscesses, intracranial tuberculomas. Multiple cerebral tuberculomas are rare, clinically important because they can mimic space-occupying intracranial lesions and cause progressive neurologic symptoms, including chronic headache, seizures, vomiting, eye abnormalities visual impairment. Early recognition is crucial to prevent long-term neurologic sequelae.

Case Presentation

We report a pediatric case presenting with intermittent headache for one year and progressively worsened during a month. The patient developed a generalized tonic-clonic seizure involving both extremities, lasting approximately two minutes and resolving spontaneously. Another symptoms right eye deviation, redness, excessive tearing, diplopia, blurred vision, intermittent fever for three weeks, nausea and vomiting. Neurological examination showed no pathological reflexes, meningeal irritation signs, or extremity weakness. Chest radiography revealed bilateral pulmonary infiltrates. Head CT scan demonstrated bilateral vasogenic edema in the cerebral and cerebellar hemispheres, raising suspicion of an intracranial space-occupying lesion. Contrast-enhanced brain MRI subsequently showed multiple cerebral tuberculomas, consistent with central nervous system tuberculosis in the setting of miliary tuberculosis. The patient was treated with the RHZE antituberculosis regimen. At discharge, headache and vomiting had resolved, while strabismus persisted.

Conclusion

Multiple cerebral tuberculomas should be considered in children who present with progressive neurologic symptoms, seizures, visual disturbances, and radiologic evidence of miliary tuberculosis. Since this condition can mimic space-occupying intracranial lesions, contrast-enhanced brain MRI is essential for accurate diagnosis. Prompt initiation of antituberculosis therapy and close clinical monitoring are essential to reduce the risk of further neurologic complications

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#109

EXTRACORPOREAL MEMBRANE OXYGENATION AND ENDOBRONCHIAL BLOCKER AS A BRIDGE TO RECOVERY IN SEVERE PULMONARY LANGERHANS CELL HISTIOCYTOSIS WITH RECURRENT PNEUMOTHORAX

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Background

Paediatric Langerhans cell histiocytosis (LCH) is a rare neoplasm of myeloid dendritic cells that can involve multiple organs. Severe lung involvement with respiratory failure occurs in only 1% and carries a 5-year survival rate of 53%, with most deaths occurring within the first year after diagnosis. Use of extracorporeal membrane oxygenation (ECMO) was rarely reported. We describe the use of veno-venous-ECMO (VV-ECMO) and endobronchial blocker in severe pulmonary LCH to bridge to recovery.

Method

Case report

Results

A 4-month-old male with a history of fever, papular rash and cough presented with pneumothorax. Skin biopsy and imaging confirmed LCH with skin, thymus, lung, liver, bone involvement and BRAF mutation. He was started on weekly vinblastine and prednisolone on day 2. He developed recurrent pneumothorax, necessitating 7 chest drain insertions, intubation and VV-ECMO for lung rest on day 19. Second-line LCH therapy with cytarabine and trametinib were used. High frequency oscillatory ventilation with low mean airway pressure was utilized to minimize lung injury. Repeated chemical pleurodesis was done. An endobronchial blocker was placed into the right main bronchus during an episode of continuous right-sided air-leak on day 50. One-lung ventilation was performed for 11 days for the air-leak to heal. Chemical pleurodesis was done after right lung recruitment. He was successfully decannulated 1 week later after 52 days of ECMO support, extubated in 8 days and weaned off from all respiratory support in 10 days.

Conclusion

VV-ECMO and endobronchial blocker can serve as a bridge to recovery in severe pulmonary LCH.

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#119

AETIOLOGY AND OUTCOME OF PAEDIATRIC ACQUIRED PULMONARY CYSTIC CONDITIONS IN THE INTENSIVE CARE SETTING

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Background

Acquired pulmonary cystic conditions are uncommon in paediatrics, while remain a major challenge in intensive care, with considerable morbidity and mortality burden.

Methods

This retrospective study reviewed the aetiology and clinical course of paediatric patients, with cystic lesions on CT thorax, and required intensive care support for respiratory failure, between 2022 and 2026.

Results

Seven patients aged 2 months to 14 years were included. Female predominance was observed. Infection was the predominant cause, followed by langerhans cell histiocytosis (LCH), and systemic autoinflammation.

Patients who developed necrotising pneumonia all required mechanical ventilation and ECMO support. Their first CT on day 8-24 from presentation already showed necrotising changes. One succumbed from resulting right heart failure. Both infants with LCH experienced tension pneumothorax within their first week of presentation. One required pre-emptive ECMO support for limited pulmonary reserve, the other stabilised from week 8 treatment. Patient of autoimmune background experienced acute respiratory distress syndrome without positive infection screen, there was already cystic changes with irreversible lung damage on presentation.

Recurrent loculated pneumothorax was the common challenge regardless of aetiology. All required multiple intercostal drainage, three eventually required chemical pleurodesis. Pulmonary haemorrhage was mainly observed in post-infectious cystic lungs.

Survivors had normal spirometry or sleep study 4-19 months post-discharge, despite residual cystic changes on CT.

Conclusions

While treatment course of acquired pulmonary cystic conditions can be refractory, good functional recovery is observed despite residual changes on CT. Early ECMO referral and development of management approach in cystic lung-related respiratory failure is worthwhile.

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#34

CHALLENGE IN DETERMINING NON CYST FIBROSIS BRONCHIECTASIS IN CHILDREN AT A TERTIARY HOSPITAL IN INDONESIA: A CASE SERIES

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Background

Non-cystic fibrosis bronchiectasis (NCFB) is an underrecognized cause of chronic respiratory morbidity in children. Its nonspecific manifestations often resemble recurrent pneumonia, asthma, or pulmonary tuberculosis (TB), resulting in delayed diagnosis. In TB-endemic countries, pulmonary TB disease is a major predisposing factor, while limited access to high-resolution computed tomography (HRCT) further complicates diagnosis. This case series describes the clinical characteristics and diagnostic challenges of pediatric NCFB in Indonesia.

Case Presentation

Six children presented with recurrent respiratory symptoms, predominantly chronic cough and progressive dyspnea, requiring repeated hospitalizations. All had a history of pulmonary and extrapulmonary TB. All patients came from low to middle socioeconomic backgrounds and were covered by Indonesia's national health insurance program. Chest radiographs demonstrated varying degrees of TB sequelae but were insufficient to confirm bronchiectasis. Rapid molecular testing for *Mycobacterium tuberculosis* was positive in 50% of the patients. HRCT established the diagnosis in all patients and revealed bronchiectasis with associated findings including fibrosis, ground-glass opacities, tree-in-bud nodules, bronchiolectasis, mediastinal lymphadenopathy, and suspected pulmonary hypertension.

Conclusion

Pediatric NCFB should be considered in children with persistent or recurrent respiratory symptoms, particularly in TB-endemic settings and those with a history of TB. Although chest radiography may reveal residual pulmonary abnormalities, HRCT remains the gold standard for confirming the diagnosis and assessing disease extent. It is likely that additional cases remain unrecognized and could be identified through increased clinical awareness and improved access to HRCT. Earlier recognition and timely HRCT evaluation may reduce diagnostic delay and improve long-term respiratory outcomes.

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#35

RALE SCORE FOR PREDICTING MECHANICAL VENTILATION AND OUTCOMES IN PEDIATRIC ACUTE RESPIRATORY DISTRESS SYNDROME IN RESOURCE-LIMITED SETTINGS: A RETROSPECTIVE COHORT

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Background

Pneumonia is the leading cause of pediatric acute respiratory distress syndrome (PARDS), and may cause substantial morbidity and mortality especially in limited resources setting. The Radiographic Assessment of Lung Edema (RALE) score is a simple tool to quantify lung involvement, but pediatric evidence remains limited. This study evaluated RALE for predicting mechanical ventilation and outcome in children with PARDS.

Methods

This retrospective cohort study included children aged 1 month to 17 years 11 months who met PALICC-2 criteria for PARDS and were admitted to a tertiary Indonesian hospital between 2023 and 2026. Chest radiographs were independently scored by two raters. Associations between RALE and outcomes were analyzed using bivariate tests and multivariable logistic regression.

Results

Among 282 subjects, median age was 14 (6–46) months, and most had mild-to-moderate PARDS (85.5%). RALE showed good inter-rater reliability (ICC 0.87; 95%CI 0.77–0.92; $p < 0.001$). RALE had poor discrimination for mechanical ventilation (AUC 0.59; 95%CI 0.52–0.66; $p = 0.008$), with 38.5% sensitivity and 83.5% specificity at ≥ 25.5 . For mortality, RALE showed fair discrimination (AUC 0.67; 95%CI 0.61–0.74; $p < 0.001$), with 48.6% sensitivity and 81.7% specificity at ≥ 24.5 . RALE was not correlated with ventilation duration ($r = 0.000$; $p = 0.995$). After adjustment for comorbidity, PARDS severity, mechanical ventilation, age, PF ratio, and lactate, RALE was independently associated with mortality (aOR 1.08; 95%CI 1.01–1.15; $p = 0.016$).

Conclusion

RALE was reliable and independently associated with mortality in pediatric PARDS, but poorly predicted mechanical ventilation and was not associated with ventilation duration.

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#40

NON RESOLVING PNEUMONIA TURNS OUT TO BE MORGAGNI HERNIA: A CASE REPORT IN A PATIENT WITH DOWN SYNDROME

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Right-sided congenital diaphragmatic hernias (CDH), especially Morgagni hernias with omental herniation, are rare and can be easily misdiagnosed due to presentation similarities with other conditions. This case report contributes to the medical literature by discussing a rare presentation of right-sided congenital Morgagni type diaphragmatic hernia (CDH) in a child with Down syndrome (Trisomy 21) with non-resolving pneumonia. A CT scan unexpectedly revealed a right-sided Morgagni hernia with omental herniation. Initially misinterpreted as an ongoing respiratory issue, the condition was successfully treated with robotic-assisted thoracic surgery (RATS), leading to a full recovery. This case highlights the importance of considering CDH in patients with persistent respiratory symptoms and the effectiveness of robotic surgery for repair.

KIOSK B: ELEPHANT

31 October 2026, 13:15 – 14:00

#138

CRACKING THE CASE OF AN INFANTILE WHEEZE: A VASCULAR TWIST!!!

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Background

Early-onset wheezing in infants should prompt evaluation for various structural/anatomical airway anomalies causes before labelling as Asthma.

Case characteristics

a 7 month old male infant who had recurrent Lower respiratory tract infections(LRTIs) with wheeze since 2 months of age, minimal or no response to inhaled bronchodilators and inhaled corticosteroids. Clinical examination revealed monophonic wheeze of asymmetric intensity (Right > left), arousing the suspicion of airway compression or malacia. Dynamic airway evaluation through Flexible Bronchoscopy showed asymmetric (Right > left) compression of anterior wall of middle one third of trachea with visible pulsations-suggestive of airway compression by vascular structure. CT angiography of neck and Thorax confirmed the vascular structure as innominate artery, passing over the anterior wall of middle trachea. On follow up, child had two episodes of LRTIs managed on outpatient basis with preserved growth and gradual reduction in intensity of wheeze.

Conclusion

All that wheezes in infants is not asthma, recognizing structural causes such as vascular rings minimizes unnecessary use of bronchodilators/inhaled corticosteroids. Incomplete vascular rings such as innominate artery cause mild airway compression (<50% lumen narrowing) which improves with age thereby avoiding the need of any surgical intervention in future.

KIOSK B: ELEPHANT

31 October 2026, 15:15 – 15:45

#56

WHEN RARE MEETS RARER: NAVIGATING THE OVERLAP OF PRIMARY CILIARY DYSKINESIA AND ATYPICAL SYNDROMIC DISEASE

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Background

Primary ciliary dyskinesia (PCD) is a rare hereditary ciliopathy caused by ultrastructural defects in the cilia of the respiratory epithelium and analogous structures. Diagnosis is challenging, however, and a considerable number of patients remain undiagnosed in clinical practice.

Methods

A 13-year-old boy from consanguineous marriage with SOFT syndrome was referred for evaluation to assess the indication for growth hormone therapy. During the evaluation, PCD was suspected.

Results

The child had a history of recurrent acute respiratory infections, otitis, pneumonia, bronchitis, and sinusitis. Cystic fibrosis was excluded at the age of 7 years based on negative sweat and fecal elastase tests. Transmission electron microscopy of cilia revealed the absence of internal dynein arms (IDA). The patient scored 8 points on the PICADAR scale. Chromosomal microarray analysis revealed a deletion on chromosome 14 (arr[GRCh37]14q32.2q32.31 [96448366_101636726]x0). As the AK7 gene is located at 14q32.2, MLPA was performed and revealed a homozygous deletion of the entire AK7 gene. Ten years prior, the patient underwent whole-exome sequencing, which identified a homozygous pathogenic variant in exon 6 of the POC1A gene and led to the diagnosis of SOFT syndrome. The AK7 deletion was not detected at that time because whole-exome sequencing lacks sufficient resolution to identify whole-gene deletions.

Conclusion

This case highlights the possibility of dual genetic diagnoses in consanguineous families, which may occur more frequently than previously appreciated. PCD remained undiagnosed for 13 years in this patient, emphasizing the importance of maintaining clinical suspicion for PCD to prevent delayed diagnosis.

KIOSK B: ELEPHANT

31 October 2026, 15:15 – 15:45

#58

RACING AGAINST THE CLOCK: BACTERIAL ETIOLOGY AND SAMPLING TIMING AMONG UNDER-FIVE PNEUMONIA IN WEST SUMATRA

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Background

Pneumonia remains a leading cause of morbidity and mortality among children under five. Delays in pathogen identification can delay targeted therapy, yet local data on bacterial etiology of pneumonia and the effect of sampling timing on diagnostic yield remain limited. Multiplex molecular assays allow rapid, comprehensive pathogen identification.

Objective

To describe the distribution of bacterial pathogens detected by multiplex PCR among hospitalized under-five children with pneumonia at a tertiary hospital in West Sumatra, and to examine the relationship between sampling timing and pathogen detection rate.

Methods

A descriptive study included 89 hospitalized children under five with pneumonia at RSUP Dr. M. Djamil Padang (January–June 2026). Specimens were analyzed using a multiplex real-time PCR panel (Pneumoplex 3.0) targeting eight bacterial pathogens. Data were summarized as frequencies and medians (IQR); detection rates were compared between samples obtained before and at/after 7 days of admission.

Results

Median age was 10.0 months (IQR 6.0–24.0); 62.9% were male, 27.0% severely malnourished. PCR was negative in 50.6%, polymicrobial in 29.2%, and monomicrobial in 20.2%. *Streptococcus pneumoniae* (15.7%) and *Haemophilus influenzae* (14.6%) were the most frequent pathogens. Detection was higher in samples collected within 7 days (55.6%) than later (34.6%). Improvement occurred in 85.4%, mortality was 14.6%, and median length of stay was 11.0 days (IQR 8.0–23.0).

Conclusion

S. pneumoniae and *H. influenzae* were the predominant pathogens, polymicrobial infections were more common than monomicrobial infections, and earlier sampling was associated with higher detection rates, underscoring that timing is critical in pediatric pneumonia diagnostics.

KIOSK B: ELEPHANT

31 October 2026, 15:15 – 15:45

#59

LOOKING BEYOND THE USUAL: A CASE SERIES OF UNCOMMON CAUSES OF PAEDIATRIC HAEMOPTYSIS

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Background

Paediatric haemoptysis is an uncommon but potentially life-threatening presentation requiring prompt evaluation. Although lower respiratory tract infections are the commonest cause, uncommon aetiologies should be considered when initial investigations are unrevealing. We describe four cases of paediatric haemoptysis with unusual causes that posed significant diagnostic challenges.

Methods

We retrospectively reviewed children presenting with acute haemoptysis and diagnostic uncertainty referred to the paediatric respiratory service at a tertiary academic centre in Singapore over a 10-month period. Clinical presentation, imaging, bronchoscopy, management and outcomes were analysed.

Results

Four uncommon causes of paediatric haemoptysis were identified: Dieulafoy lesion, protracted bacterial bronchitis (PBB), bronchiectasis with bronchial artery hypertrophy, and exercise-induced pulmonary haemorrhage (EIPH). Presentations ranged from intermittent blood-streaked sputum in PBB (an uncommon presentation) to massive haemoptysis in bronchiectasis and Dieulafoy lesion. Computed tomography pulmonary angiography identified bronchial artery hypertrophy in the patient with bronchiectasis, who underwent successful bronchial artery embolisation. Bronchoscopy in the patient with mild haemoptysis demonstrated diffuse endobronchial inflammation and mucosal friability consistent with PBB, with complete resolution following a four-week antibiotic course. In another patient, recurrent massive haemoptysis persisted despite embolisation; bronchoscopy revealed an endobronchial lesion in the right lower bronchus, confirmed histopathologically as a Dieulafoy lesion. EIPH was diagnosed based on a characteristic exercise-related history after exclusion of alternative causes. All patients achieved favourable clinical outcomes.

Conclusion

Paediatric haemoptysis has a broad differential diagnosis beyond respiratory infections. A systematic approach incorporating advanced imaging, bronchoscopy and microbiological investigations facilitates timely diagnosis, targeted treatment and favourable outcomes.

KIOSK B: ELEPHANT

31 October 2026, 15:15 – 15:45

#60

OPTIMIZING DIAGNOSTICS OF CHRONIC COUGH IN CHILDREN

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Background/Purpose

Chronic cough persisting 4 weeks or longer requires examination to determine its cause. Post-infectious cough following an acute respiratory infection requires careful evaluation, as chronic diseases may present as residual symptoms, necessitating a multidisciplinary diagnostic approach. To optimize outpatient differential diagnosis through comprehensive clinical and laboratory assessment of children with symptoms mimicking prolonged infections.

Methods

Eighty children aged 2–17 years (56% boys) presenting with asthenia, subfebrile temperature, chronic cough, arthralgia, dyspepsia, or skin manifestations after infections were evaluated. Whooping cough was excluded in all patients. All underwent laboratory and instrumental investigations and specialist consultations. Statistical analysis used nonparametric tests, with $p < 0.05$ considered significant.

Results

Allergic diseases were newly diagnosed in 17.5% (14/80) of patients, most commonly asthma (50%) and allergic rhinitis (35.7%). Chronic cough was the leading symptom in 85.7%, and total IgE levels were significantly higher than in other patients ($p = 0.042$). ENT pathology was identified in 18.8% (15/80), including grade II–III adenoid hypertrophy (80%) and chronic tonsillitis (20%); chronic cough occurred in 87%. Gastrointestinal pathology was present in 17.5% (14/80), with chronic cough in 57.1%; gastroesophageal reflux disease was detected in 75% of children with cough. Comorbidity was common, with ENT disorders coexisting with gastrointestinal and allergic diseases in 86% of cases.

Conclusions

The high prevalence of multimorbidity in children with chronic cough (ENT pathology, asthma, GERD), highlights the need for a structured diagnostic algorithm and multidisciplinary evaluation. Because chronic cough has diverse etiologies, individualized diagnostic assessment is essential for timely diagnosis, personalized treatment, and improved clinical outcomes.

KIOSK B: ELEPHANT

31 October 2026, 15:15 – 15:45

#62

BEYOND CURE: NINE-YEAR OUTCOMES AND VULNERABILITIES IN PEDIATRIC MULTIDRUG-RESISTANT TUBERCULOSIS

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Background

Multidrug-resistant tuberculosis (MDR-TB) remains a challenge among children and adolescents in the Philippines, yet longitudinal data are limited.

Objective

To describe clinical and treatment characteristics; assess treatment outcomes and annual trends; and identify factors associated with treatment success.

Methods

We conducted a retrospective cohort study of 192 pediatric patients with MDR-TB managed at a tertiary referral hospital in Caloocan City, Philippines, from 2017–2025. Clinical, nutritional, diagnostic, treatment, and outcome data were extracted from medical records and an MDR-TB registry. Multivariable logistic regression identified factors independently associated with treatment success.

Results

Adolescents aged 16–18 years comprised 37.5% of patients and 66.2% were male. Pulmonary tuberculosis predominated (87.0%), with bilateral involvement in 82.0%. Wasting or thinness (46.9%) and stunting (30.7%) were common. Treatment success was achieved in 77.1%, including 31.8% cured and 45.3% completing treatment; mortality occurred in 8.3% and loss to follow-up in 12.5%. Annual success ranged from 50.0% in 2021 to 91.7% in 2019 and 2020. Previous tuberculosis treatment (aOR, 0.36; 95% CI, 0.16–0.80) and individualized regimens (aOR, 0.33; 95% CI, 0.14–0.79) were independently associated with lower odds of success.

Conclusions

Pediatric MDR-TB predominantly affected adolescents, with nutritional vulnerability and extensive pulmonary disease. Despite this burden, 77.1% achieved treatment success, although mortality and loss to follow-up remained challenges. Previously treated patients and those receiving individualized regimens may benefit from intensified monitoring. Adolescent-centered care, nutritional rehabilitation, and treatment continuity should remain priorities.

KIOSK B: ELEPHANT

1 November 2026, 10:30 – 11:00

#128

NUTRITIONAL APPROACH IN THE MANAGEMENT OF MALNUTRITION IN THE CRITICALLY ILL CHILDREN

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Background

Malnutrition is a prominent complication in critically ill children, contributing to adverse outcomes and poor recovery. Multiple international guidelines on nutrition protocol for the critically ill children population have been established, however, Hong Kong still lacks an institution-specific guideline for nutrition in PICUs. The purpose of this paper is to propose nutritional guideline recommendations with reference to selected PICU protocols from Western and Asian nations.

Methods

A comprehensive literature search was conducted using the PubMed database. The search strategy targeted English-language peer reviewed articles including guidelines, case reports and observational studies. Articles were screened by title and abstract for relevance to nutritional management in paediatric critical care patients and a comparison of selective international nutritional management protocols and guidelines were conducted. Studies detailing the causes, solutions and international practices to malnutrition in PICUs globally were considered in this review.

Results

Common causes of malnutrition in critically ill children include an increased metabolic demand, a prescription-delivery gap, disease-specific diet requirements, drug-induced gastrointestinal dysfunction and system-level barriers. Highlighted recommendations from global nutritional guidelines include the use of indirect calorimetry for energy estimation, disease-specific nutrition formulas, early nutritional risk screening and feeding initiation, protocol-driven enteral feeding initiation and support from a dedicated multidisciplinary nutrition team. (Fig.1)

Conclusion

Structured nutritional protocols significantly improve care quality in PICUs and reduce risks of malnutrition during hospitalisation. The standardisation of nutrition for critically ill children reduces complications due to malnutrition, ultimately improving recovery and patient outcome.

Keywords

Malnutrition; Paediatric Intensive Care unit; PICU; Enteral nutrition

KIOSK B: ELEPHANT

1 November 2026, 10:30 – 11:00

#137

BRIDGING THE RESPIRATORY SUPPORT GAP: ONE-YEAR EXPERIENCE WITH WARD-BASED HIGH-FLOW NASAL CANNULA

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Background/Purpose

Limited pediatric intensive care unit (PICU) capacity poses challenges in managing children with acute respiratory distress, particularly those with malignancies. Outside the PICU, bilevel positive airway pressure (BiPAP) and invasive mechanical ventilation were unavailable. High-flow nasal cannula (HFNC) was newly introduced as the highest level of respiratory support available in pediatric wards. This study evaluated HFNC utilization and clinical outcomes during its first year of implementation.

Methods

We retrospectively reviewed children receiving HFNC outside the PICU over one year at a tertiary referral hospital. Demographic and clinical characteristics, underlying conditions, ward location, PICU escalation, goals of care, and hospital outcomes were reviewed. Data were analyzed descriptively and reported as frequencies and proportions.

Results

Seventeen children received ward-based HFNC, of whom 14 (82.4%) were managed in the hematology-oncology ward. Six patients (35.3%) required escalation to the PICU, while 11 (64.7%) remained outside intensive care. Four of six patients transferred to the PICU subsequently returned to the ward, and three survived to hospital discharge. Overall, eight patients (47.1%) survived to discharge. Importantly, deaths among oncology patients occurred in children receiving palliative care who were not candidates for PICU escalation and therefore should not be interpreted as failure of HFNC escalation.

Conclusions

Where BiPAP and mechanical ventilation are unavailable outside the PICU, ward-based HFNC provides a feasible intermediate level of respiratory support. It may serve both as a bridge for children requiring potential escalation and as symptom-directed respiratory support when intensive care escalation is not appropriate.

KIOSK B: ELEPHANT

1 November 2026, 10:30 – 11:00

#83

CLINICAL-LABORATORY PROFILE AND OUTCOMES OF SEVERE ADENOVIRUS PNEUMONIA IN CHILDREN: EXPERIENCE FROM THE PEDIATRIC RESPIRATORY INTENSIVE CARE UNIT IN BANGLADESH

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Background and Purpose

Human adenovirus (HAdV) is an important cause of lower respiratory tract infection in children and may lead to respiratory failure, multisystem involvement, and death. Data on critically ill children with adenovirus pneumonia remain limited in resource-limited settings. This study evaluated the clinical and laboratory profile, complications, and outcomes of children with severe adenovirus pneumonia admitted to a pediatric respiratory intensive care unit (RICU).

Methods

This observational study included 42 children with polymerase chain reaction-confirmed adenovirus pneumonia admitted to the RICU of Bangladesh Shishu Hospital and Institute between January 2025 and June 2026. Demographic, clinical, laboratory, therapeutic, and outcome data were analyzed and compared between survivors and non-survivors.

Results

The median age was 14 months, and 59.5% were male. Crepitations (88.1%), poor feeding (57.1%), and wheezing (40.5%) were common findings. Thrombocytopenia occurred in 28.6% and bacterial coinfection in 21.4%. Septic shock (38.1%) and disseminated intravascular coagulation (21.4%) were prominent extrapulmonary complications. High-flow nasal cannula was used in 95.2%, while 21.4% required invasive mechanical ventilation, predominantly following escalation from HFNC. Overall mortality was 14.3%. Non-survivors were younger and had greater hypoxemia, thrombocytopenia, hypoalbuminemia, systemic inflammation, and hyperlactatemia. Septic shock, DIC, MODS, and invasive mechanical ventilation were more frequent among non-survivors.

Conclusion

Severe adenovirus pneumonia in critically ill children was associated with substantial respiratory compromise, systemic inflammation, and extrapulmonary complications. Non-survivors demonstrated greater hypoxemia, inflammatory derangement, coagulopathy, and multiorgan dysfunction, underscoring the importance of early recognition of clinical deterioration and timely intensive care support.

KIOSK B: ELEPHANT

1 November 2026, 10:30 – 11:00

#84

ASSESSMENT OF LONG-TERM RESPIRATORY SEQUELAE OF COVID-19 IN CHILDREN AGED 6–14 YEARS MANAGED AT ATERTIARY CHILDREN'S HOSPITAL IN SRI LANKA

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Background

Children experience less severe acute COVID-19 than adults; however, persistent symptoms, termed Long COVID or Post-Acute Sequelae of COVID-19 (PASC), have been increasingly recognised. Limited data exist regarding respiratory sequelae in children. This study assessed the prevalence and clinical features of PASC, respiratory function and exercise capacity, and its association with acute COVID-19 severity.

Methods

A prospective cohort study was conducted at Lady Ridgeway Hospital for Children, Sri Lanka. Children aged 6–14 years with laboratory-confirmed COVID-19 admitted between May 2021 and February 2022 were reviewed six months after discharge. Clinical assessment, spirometry and six-minute walk test (6MWT) were performed.

Results

Among 213 children, 59% were female, mean age was 10 years. Most had mild COVID-19 (78%), 9.5% had moderate disease and 12% developed MIS-C. PASC were reported by 19%. Common symptoms included fatigue (12%), exercise intolerance (11%) headache (7%). Cough, wheezing, exertional dyspnoea and sleep disturbance also reported. 20% reported frequent chest infections following COVID-19. Disease severity was significantly associated with PASC ($p < 0.001$), with MIS-C patients being more likely to develop PASC. Among children with acceptable spirometry, abnormal FEV₁ and FVC were found in 13% and 10%, respectively. There was no significant association between disease severity and abnormal spirometry. Mean 6MWT distance was 400 m, with no exertional desaturation.

Conclusion

PASC occurred in approximately one in five children six months after COVID-19. Children with MIS-C were at greater risk of PASC. Further studies are needed to determine the significance of abnormal lung function and recurrent chest infections following COVID-19.

KIOSK B: ELEPHANT

1 November 2026, 10:30 – 11:00

#85

CURRENT PRACTICES IN WEANING HOME OXYGEN THERAPY FOR INFANTS WITH BRONCHOPULMONARY DYSPLASIA AMONG THAI PEDIATRICIANS: A NATIONWIDE SURVEY

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Background

Infants with bronchopulmonary dysplasia (BPD) often require prolonged home oxygen therapy (HOT). However, no standardized national guidelines currently exist in Thailand for oxygen weaning.

Purpose

To evaluate current home oxygen management and oxygen weaning practices among Thai pediatricians caring for infants with BPD.

Methods

A nationwide cross-sectional survey was conducted between July 2025 and April 2026 using a validated 35-item electronic questionnaire distributed through national pediatric professional networks. The survey assessed oxygen management practices, weaning strategies, and perceived barriers. Analyses were limited to respondents with prior experience managing infants with BPD receiving HOT within the previous 5 years.

Results

A total of 282 pediatricians completed the survey, of whom 131 with prior HOT experience were included in the analysis. Oxygen weaning practices varied across specialties. Pediatric pulmonologists more frequently targeted $\text{SpO}_2 > 95\%$ in infants with BPD and pulmonary hypertension (76.6%, $p < 0.001$). Adequate growth and absence of respiratory distress were the most commonly selected readiness criteria for oxygen weaning. Pediatric pulmonologists more frequently incorporated normal overnight pulse oximetry into readiness assessment (48.9%, $p = 0.003$). Room air challenge testing was the most frequently selected assessment method before oxygen discontinuation (48.1%). Median HOT duration was 6 months and was longer among pediatric pulmonologists ($p = 0.007$). Overall, 93.1% supported the development of national clinical practice guidelines.

Conclusions

Home oxygen weaning practices for infants with BPD vary across specialties in Thailand. Standardized clinical practice guidelines may help promote more consistent oxygen weaning practices.

KIOSK B: ELEPHANT

1 November 2026, 10:30 – 11:00

#144

A CASE OF PERSISTENT NON-RESOLVING PNEUMONIA – NEED TO THINK BEYOND INFECTIONS!!!

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Background

Etiology of Pneumonia in children is usually infective requiring treatment with various antimicrobial agents. However non infective causes should also be kept in mind especially in a setting of non resolving Pneumonia.

Case Details

8 month old previously well Baby presented with h/o Fever and cough since past 2 weeks and fast breathing since 2 days. On examination - afebrile, tachypnoeic, hypoxia with severe respiratory distress. Blood gas s/o both respiratory and metabolic acidosis with hypoxia and hypercarbia, started on respiratory support via High Flow Nasal Cannula, iv antibiotics and other supportive measures. CXR showed b/l multifocal consolidation. CECT chest showed multifocal consolidation in central and dependent lobes. Nasal swab RT PCR and TB work up were normal. Relooking into the clinical scenario and radiology, aspiration was suspected and history was retaken which revealed regular CASTOR OIL instillation into nose as a ritual 2 weeks back. Bronchoscopy and Bronchoalveolar lavage (BAL) - revealed diffuse scarring of the airways with sterile BAL Culture. BAL Cytology showed numerous LIPID LADEN MACROPHAGES (LLM) with a LLM Index of 350 (cut off-100). suggestive of Lipoid Pneumonia. In view of persistent hypoxia and inability to wean off from respiratory support, systemic steroids (Prednisolone) was added and tapered over 6 weeks. Child improved gradually in terms of respiratory distress and hypoxia.

Conclusion

Lipoid pneumonia should be considered as a differential in a setting of persistent pneumonia in Indian setting where oil instillation in infants is a common practice. Though usually self limiting and requires supportive therapy, occasionally systemic steroids are needed for persistent hypoxia and respiratory distress.

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#75

COMPARING NASOPHARYNGEAL SWAB AND SPUTUM IN DETECTING MYCOPLASMA PNEUMONIAE PNEUMONIA IN CHILDREN: A SINGLE-CENTRE STUDY IN HONG KONG

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Background

Mycoplasma pneumoniae is an important causative pathogen in childhood pneumonia. Sputum monoplex polymerase chain reaction (PCR) is commonly used for detecting the infection. Recently, nasopharyngeal swab (NPS) multiplex PCR test has become available. It detect 22 common respiratory tract viruses and bacteria, including M. pneumoniae, with a shorter turnover time. This study aimed to compare NPS multiplex PCR test and sputum monoplex PCR test in detecting M. pneumoniae infection in children with pneumonia.

Methods

This retrospective study reviewed test results of paediatric patients diagnosed with pneumonia in Tuen Mun Hospital from January 1, 2023, to December 31, 2024, with both NPS multiplex PCR test and in-house sputum monoplex PCR test performed. Detection rates were compared. Sensitivity, specificity, likelihood ratios, positive predictive value (PPV), and negative predictive value (NPV) of the NPS test were compared against the sputum test.

Results

1148 pneumonia cases with both NPS and sputum tests performed were included. Detection rate of M. pneumoniae in sputum was significantly higher (51.3%) than that of NPS (21.0%; $P < 0.001$). The tests show fair agreement (κ value = 0.38). Comparing with the sputum test, NPS has a sensitivity of 39.9% and specificity of 98.9% for diagnosing M. pneumoniae infection.

Discussion and Conclusions

Although representativeness is limited by in-house sputum test used, and results may be affected by NPS collection variability, the significantly lower detection rate and sensitivity in NPS multiplex PCR test reflects it cannot replace the sputum test locally as the major test for detecting M. pneumoniae infection.

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#90

SHIFTING PATTERNS OF PAEDIATRIC VIRAL RESPIRATORY INFECTIONS: A RETROSPECTIVE COHORT STUDY OF COVID-19 PANDEMIC-BORN CHILDREN

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The non-pharmaceutical interventions (NPIs) implemented during the COVID-19 pandemic have successfully reduced respiratory virus transmission. However, after the measures were lifted, a rebound in respiratory tract infections was observed worldwide. Our study aims to investigate the impact of NPIs on viral respiratory infection in the paediatric population born during and immediately after the COVID-19 pandemic.

This is a local retrospective cohort study of hospitalised children aged 28 days to 2 years with viral respiratory tract infection in a regional hospital. The characteristics were compared between the pre-pandemic group (baseline) (1 March 2018 to 28 February 2019) (n=779), the 1st-year post-pandemic group (1 March 2023 to 29 February 2024) (n=554) and the 2nd-year post-pandemic group (1 March 2024 to 28 February 2025) (n=537).

The viral co-infection rate has increased from 12.3% to 18.2% (p=0.003) 1st-year post-pandemic and came down to 14.0% in 2nd-year (p=0.056), comparable to baseline (p=0.384). The mean hospital length of stay has increased from 2.37days to 2.87days (p<0.001) in 1st-year and remains similar at 3.96 days in 2nd-year (p=0.235). There is an increase in patients requiring respiratory support in 1st-year from 14.8% to 23.5% (p<0.001) and a reduction in 2nd-year to 16.8% (p=0.006), which is comparable to baseline (p=0.326).

Children younger than 2 years old hospitalised immediately after the pandemic have more viral co-infections, longer hospital length of stay and increased respiratory support use, which then returned to baseline in the 2nd year post-pandemic. Further study on characteristics in symptomatology and treatment will be conducted.

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#97

BALANCING THE EFFICACY AND TOXICITY OF LINEZOLID IN AN ADOLESCENT RECEIVING A LONG-TERM REGIMEN FOR DRUG-RESISTANT TUBERCULOSIS: A CASE REPORT

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Background

Long-term treatment of severe pulmonary drug-resistant tuberculosis (DR-TB) in children can be challenging when complicated by drug toxicity. Linezolid is an important component of the regimen but can cause myelosuppression and peripheral neuropathy. Dose adjustment is essential to control toxicity without sacrificing efficacy.

Case

A 15-year-old girl weighing 42.5 kg was diagnosed with severe pulmonary DR-TB with extensive consolidation, fibrosis, and cavitation. She received 6Bdq-Lzd-Lfx-Cfz-Cs/6–12Lfx-Cfz-Cs, including linezolid 450 mg/day (10.6 mg/kgBW/day). After 6–8 weeks, hemoglobin decreased from 11.6 to 5.9 g/dL, accompanied by leukopenia, thrombocytopenia, muscle weakness, extremity pain, numbness, and gait disturbance. Multidisciplinary evaluation included hematological tests, peripheral blood smear, serum iron studies, kidney and liver function tests. Nerve conduction studies revealed predominantly axonal mixed sensorimotor polyneuropathy of the lower extremities, while cerebrospinal fluid testing was negative for TB meningitis, consistent with drug-induced peripheral neuropathy. Sputum culture was negative after 2 months. Due to recurrent severe anemia and progressive neuropathy, linezolid was reduced to 300 mg/day (7.1 mg/kgBW/day). Polyneuropathy was treated with pyridoxine, mecobalamin, gabapentin, and amitriptyline, while anemia required serial blood transfusions. Hemoglobin subsequently increased to 9.5 g/dL with improvement of hematological abnormalities and neuropathy.

Conclusions

Balancing linezolid efficacy and toxicity remains challenging. Clinical and laboratory monitoring, objective neurological assessment, multidisciplinary management, and appropriate dose adjustment may control toxicity while maintaining DR-TB treatment efficacy.

Keywords

Drug-resistant tuberculosis, linezolid, peripheral neuropathy

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#113

RE-EMERGENT MULTIDRUG-RESISTANT TUBERCULOSIS AFTER SHORT-COURSE BPALM THERAPY IN AN ADOLESCENT COMPLICATED BY LUNG ABSCESS AND PLEURAL EFFUSION

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Background

The six-month all-oral BPALM regimen (bedaquiline, pretomanid, linezolid, and moxifloxacin) is currently recommended for adolescents with multidrug-resistant or rifampicin-resistant tuberculosis (MDR/RR-TB) due to its high treatment success rate. However, data on relapse or re-emergence of resistance after apparent microbiological conversion remain limited, particularly in adolescents with extensive pulmonary disease.

Case

A 5-year-old girl with pulmonary MDR-TB who completed a six-month BPALM regimen with documented sputum conversion to negative from month 1 through month 6 was reported. Two months after treatment completion, she presented with recurrent fever, productive cough, and significant weight loss. Chest imaging revealed a right lung abscess and left pleural effusion. Repeat molecular testing using Xpert MTB/RIF Ultra and Xpert MTB/XDR demonstrated *Mycobacterium tuberculosis* with persistent rifampicin and isoniazid resistance, while fluoroquinolone and second-line injectable resistance were not detected. Given the relapse after short-course therapy, treatment was escalated to an individualized long-course MDR-TB regimen consisting of six months of bedaquiline, levofloxacin, linezolid, clofazimine, and cycloserine, followed by fourteen months of levofloxacin, linezolid, clofazimine, and cycloserine.

Discussion

Re-emergence of MDR-TB after microbiological conversion raises critical questions regarding treatment failure versus reinfection. In this patient, several risk factors may have contributed, including severe malnutrition, anemia, hypoalbuminemia, extensive lung destruction with abscess formation, and ongoing household exposure to drug-resistant tuberculosis. These conditions likely impaired host immunity or drug efficacy, predisposing to disease relapse.

Conclusion

This case underscores that, despite high efficacy, short-course BPALM therapy may fail in adolescents with significant clinical and biological risk factors.

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#89

RESPIRATORY VIRUSES IN BRONCHOALVEOLAR LAVAGE: CLINICAL AND LABORATORY FEATURES IN IMMUNOCOMPROMISED CHILDREN

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Background

Immunocompromised children are at high risk for pulmonary infections, yet pediatric data on bronchoalveolar lavage (BAL) multiplex PCR for viral detection remain limited.

Objectives

To determine the prevalence of BAL-detected respiratory viruses and describe associated clinical, radiologic, and laboratory characteristics in immunocompromised children.

Methods

Retrospective study of immunocompromised patients aged 1–20 years undergoing BAL for new pulmonary infiltrates (2016–2025). Multiplex PCR identified viruses, comparing virus-positive and virus-negative groups.

Results

Among 94 patients, respiratory viruses were detected in 27 (28.7%), predominantly Rhino/Enterovirus (59.2%), followed by adenovirus, human metapneumovirus, and bocavirus. The virus-positive group had higher trimethoprim-sulfamethoxazole prophylaxis rates (96.3% vs. 71.6%, $p=0.010$). Cough (74.1% vs. 40.3%, $p=0.003$), sputum production (61.5% vs. 29.9%, $p=0.005$), and crepitations (37.0% vs. 13.4%, $p=0.010$) were significantly more frequent in virus-positive patients. Imaging findings and clinical outcomes (PICU admission, respiratory failure, hospital stay) were comparable between groups. Notably, BAL galactomannan positivity was higher in virus-positive patients (50.0% vs. 15.6%, $p=0.005$).

Conclusions

Respiratory viruses, mainly Rhino/Enterovirus, are frequently detected in BAL fluid from immunocompromised children with pulmonary infiltrates. Viral detection correlates with specific clinical features and prophylaxis, though radiologic findings and outcomes are similar. Elevated BAL galactomannan positivity suggests potential fungal co-infection.

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#98

ALLERGIC RHINITIS AND VOCAL TICS IN A COMMUNITY PAEDIATRIC CLINIC

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Background

Allergic rhinitis (AR) and vocal tics (VC) are common disorders in children, and VC often misdiagnosed and mismanaged as coughing of other causes.

Methods

Retrospective review of 30 children presenting with VC in a community clinic from 2024 to 2026. Children presenting with VC with or without other symptoms were included.

VC was diagnosed by characteristic brief, repeatedly, non-rhythmic throat clearing noise that mimics dry coughing, improved with distraction, temporarily and voluntarily suppressible, and absent during sleep.

AR was diagnosed by relevant clinical history, physical examination findings, supportive laboratory tests.

All AR were given topical nasal steroid and oral antihistamine, then followed up by 4 weeks, clinical response recorded. For those who did not improve, medical treatment were continued and follow up in another 4 weeks or phone call were made.

Results

30 children were included. There was male predominance (M:F = 21:9), mean age 7.0 +/- 2.1 years. AR was present in 27 (90%). Other motor tics were present in 4 (13.3%). 5 (16.7%) had underlying psychological diagnoses or preliminary diagnoses, notably autism and attention deficit hyperactivity disorder.

Symptomatic improvement of AR was significantly associated with an improvement of VC at 4 weeks ($p=0.028$) and 8 weeks ($p=0.011$). Those with underlying psychological factors also showed improvement by 8 weeks of treatment. We cannot establish a causal relationship between AR and VC due to a small sample size.

Conclusion

Allergic rhinitis is very common among children with vocal tics. Treatment of AR was associated with improvement in VC symptoms.

KIOSK B: ELEPHANT

1 November 2026, 12:45 – 13:30

#127

FACTORS PREDICTIVE OF FAILURE OF MEDICAL MANAGEMENT IN CHILDREN WITH EMPYEMA THORACIS. AN AMBISPECTIVE STUDY

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Background

The first line of treatment of Empyema thoracis in children is medical (antibiotics, intercostal chest tube drainage ± intrapleural fibrinolytics), if fails-surgical intervention. This sequential way of treatment at times causes additional complications and prolonged hospital stay due to delay in surgical intervention. The aim of this study was to identify the risk factors predictive of failure of medical management in children with Empyema.

Methods

An Ambispective (retrospective + prospective) study was conducted over a period of three years in children upto 18 years admitted with the diagnosis of Empyema in a tertiary care hospital. Eligible children were divided into two groups: medical treatment success (MTS) vs medical treatment failure (MTF). Various clinical, laboratory and radiological parameters were studied among the two groups. Descriptive statistics and logistic Regression analysis were applied.

Results

42 children with empyema were included, 25 (59.5%) were in the MTS and 17 (40.5%) in MTF group. None of the clinical parameters and laboratory parameters studied among two groups, were statistically significant on univariate analysis. However radiological parameters pleural thickening on chest ultrasound and loculations in CT chest were found to be statistically significant risk factors (p values 0.010 & 0.016 respectively), predictive of failure of medical management. Multivariate logistic regression analysis showed same radiological findings as independent risk factors for medical treatment failure with odds ratios of 3.41 (pleural thickening) and 7.03 (loculations) respectively.

Conclusion

Empyema thoracis in children needs to be managed medically first, however in presence of certain risk factors (pleural thickening, loculations) surgical options should be considered early in the course of the disease to avoid further complications and morbidity.

KIOSK B: ELEPHANT

1 November 2026, 15:15 – 15:45

#105

ADAPTING A SCHOOL-BASED ASTHMA PROGRAMME: SELF-REPORT DIARY CARD MONITORING AMONG JUNIOR HIGH SCHOOL STUDENTS

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Background

Ongoing self-monitoring of asthma symptoms is essential for timely recognition of recurrence and appropriate management, yet self-report tools such as diary cards are not routinely used among school-aged children with asthma.

Objective

To implement and evaluate a self-report diary card for monitoring asthma symptom recurrence among junior high school students with suspected asthma, following school-based screening and an educational intervention for students and teachers.

Methods

Out of 1,425 students across two public schools, 685 students (48%) returned completed questionnaires with parental consent. Forty-eight students were identified as having asthma based on three screening questions (history of asthma, physician diagnosis, and prior receipt of asthma management instructions), and 46 attended spirometry examination. The intervention stage was conducted only in one school for its higher cooperation, involving 15 teachers and 19 students. The 19 students self-monitored their asthma symptoms for 3 months using a diary card. This study is part of a multicentre study in 6 countries (AdAPt Study).

Results

All subjects (100%) were able to use the diary card self-reports. Based on them, 12/19 students (63%) reported symptom recurrence during the 3-month period. Seven students reported using inhalers (pMDI/DPI), 3 used a nebulizer, 1 used oral salbutamol, and 1 did not report how exacerbations were managed.

Conclusion

Self-report diary cards proved feasible for monitoring asthma symptom recurrence among junior-high school students following school-based screening and intervention. The relatively high self-reported recurrence rate indicates a need for strengthened sustained asthma education and management for students and teachers in the school setting.

KIOSK B: ELEPHANT

1 November 2026, 15:15 – 15:45

#106

BEYOND TUBERCULOSIS: ADVANCED HIV UNMASKED BY CLINICAL PULMONARY TUBERCULOSIS AND STREPTOCOCCAL PNEUMONIA COINFECTION IN AN UNDIAGNOSED CHILD

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Background

Advanced pediatric HIV infection is frequently undiagnosed due to nonspecific manifestations despite normal growth and development, with opportunistic infections often providing the first diagnostic clue. We report a case of previously unrecognized advanced HIV unmasked by clinical pulmonary tuberculosis with concomitant Streptococcal pneumonia.

Case Presentation

An 11-year-11-month-old boy was referred with prolonged fever, recurrent productive cough, progressive weight loss, and decreased appetite despite prior ceftriaxone therapy. Although he had experienced recurrent respiratory infections for two years, HIV had never been suspected, and his developmental milestones were age-appropriate. Investigations revealed three reactive HIV rapid tests, profound immunosuppression (CD4 count 3 cells/ μ L), pancytopenia, severe malnutrition, right upper lung consolidation suggestive of clinical pulmonary tuberculosis despite a negative Xpert MTB/RIF result, and Streptococcus pneumoniae detected by multiplex qRT-PCR. He was diagnosed with advanced HIV infection complicated by clinical pulmonary tuberculosis and bacterial pneumonia, and was treated with anti-tuberculosis therapy, empirical meropenem, cotrimoxazole prophylaxis, nutritional rehabilitation, and planned antiretroviral therapy after tuberculosis stabilization.

Conclusion

This case demonstrates that advanced pediatric HIV may remain clinically unrecognized until opportunistic infections reveal profound immunosuppression. Clinical pulmonary tuberculosis, particularly when accompanied by recurrent infections, progressive weight loss, and severe malnutrition, should prompt evaluation for underlying HIV even in children with normal developmental milestones and negative microbiological confirmation for tuberculosis. Early recognition of HIV is essential to enable timely antiretroviral therapy and improve long-term outcomes.

Keywords

pediatric HIV; clinical pulmonary tuberculosis; Streptococcus pneumoniae; opportunistic infection; severe immunosuppression.

KIOSK B: ELEPHANT

1 November 2026, 15:15 – 15:45

#107

PERSISTENT AIR LEAK FOLLOWING LOBECTOMY FOR CPAM TYPE II WITH PULMONARY SEQUESTRATION IN A CHILD: SUCCESSFUL AUTOLOGOUS BLOOD PATCH PLEURODESIS

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Background/Purpose

Persistent air leak (PAL), defined as an air leak persisting beyond 5 postoperative days, is a recognised complication following pulmonary resection. Autologous blood patch pleurodesis (ABPP) is an established treatment in adults, but evidence in children remains limited. We describe a paediatric case of PAL successfully treated with ABPP following pulmonary resection for congenital pulmonary airway malformation (CPAM) with pulmonary sequestration.

Methods

A 16-month-old girl with right lower lobe CPAM type II and intradiaphragmatic pulmonary sequestration underwent right thoracotomy, right lower lobectomy, and excision of the pulmonary sequestration. Postoperatively, persistent right pneumothorax with ongoing air leak developed despite supplemental oxygen, repeated chest tube insertion, and low-pressure suction. Following multidisciplinary discussion, ABPP was performed as a minimally invasive treatment. Under aseptic conditions in the Paediatric Intensive Care Unit, 2 mL/kg of autologous blood was obtained via an arterial line, instilled through the chest tube, and followed by 5 hours of clamping.

Results

The air leak resolved within 24 hours of ABPP. Serial chest radiographs demonstrated complete resolution of the pneumothorax without recurrence. The patient was discharged clinically well and remained asymptomatic, with no recurrent pneumothorax or procedure-related complications during 8 months of follow-up.

Conclusions

ABPP may provide a simple, minimally invasive, and cost-effective treatment option for PAL in children when other conventional management fails. This case supports consideration of ABPP as an alternative to more invasive interventions. Further studies are warranted to establish its safety, efficacy, and optimal technique in paediatric populations.

KIOSK B: ELEPHANT

1 November 2026, 15:15 – 15:45

#110

ADMISSION NEUTROPHIL-TO-LYMPHOCYTE RATIO AS A PREDICTOR OF PEDIATRIC INTENSIVE CARE UNIT ADMISSION IN CHILDREN UNDER FIVE HOSPITALIZED WITH PNEUMONIA

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Background/Purpose

Pneumonia is a leading cause of death in children under five years old. However, practical bedside tools to detect early signs of worsening illness are limited, especially where advanced scoring systems are not available. The neutrophil-to-lymphocyte ratio (NLR), from a standard blood count, reflects immune activation and lymphocyte decline during severe infections. Its role in predicting intensive care needs in young children is not well established.

Methods

This cross-sectional study included 46 children aged 1–59 months hospitalized with pneumonia from 2023 to 2025. NLR was calculated from the initial blood count. Patients were grouped by pediatric intensive care unit (PICU) admission. Statistical analyses included Mann–Whitney U, chi-square, Fisher’s exact test, ROC analysis, and logistic regression adjusted for nutritional status.

Results

Twenty-five children (54.3%) required PICU care. Median NLR was higher in the PICU group than the ward group: 3.4 (IQR 2.7–3.9) vs 1.5 (1.4–1.6), $p < 0.001$. Undernutrition was more common in the PICU (60.0% vs 14.3%, $p = 0.002$). Age, sex, and asthma did not differ. NLR showed strong predictive value (AUC 0.964, 95% CI 0.909–1.000). Using a 2.1 cutoff, sensitivity was 100%, specificity 95.2%, and negative predictive value 100%. Each unit increase in NLR raised PICU odds thirtyfold (aOR 30.2, 95% CI 4.2–218.7, $p < 0.001$).

Conclusions

Admission NLR independently predicted intensive care needs. No child with an NLR below 2.1 needed PICU, suggesting its potential as a triage tool. Larger studies are needed for validation.

KIOSK B: ELEPHANT

1 November 2026, 15:15 – 15:45

#111

PERSISTENT WHEEZING IN A CHILD: A RARE CASE OF TRACHEAL MUCOEPIDERMOID CARCINOMA

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Background

Persistent wheezing in children is frequently misdiagnosed as refractory asthma. Tracheal tumors in children which are rare can present with similar symptoms and often causing diagnostic delays and potentially life-threatening airway obstruction.

Case Presentation

A 10-year-old boy presented with progressive and persistent wheezing that did not respond to standard asthma treatment. During a severe exacerbation, his condition failed to improve despite intensive medical therapy, including intravenous magnesium sulfate ("MgSO" _4). Flexible bronchoscopy revealed an obstructive mass in the distal trachea. The tumor was successfully removed endobronchially using bronchoscopic cryotherapy. Histological evaluation and immunohistochemical analysis confirmed a low-grade mucoepidermoid carcinoma (MEC). His respiratory symptoms resolved completely after the procedure, with no recurrence during follow-up.

Discussion

Pediatric primary tracheal MEC is a rare entity. This case highlights the clinical pitfall of anchoring bias toward refractory asthma in localized airway obstruction. Unresponsiveness to maximal bronchodilators, including parenteral ["MgSO"]_4, serves as a critical red flag for organic airway lesions. Interventional bronchoscopy with cryotherapy provides an effective, minimally invasive alternative to open surgery for endoluminal tumor debulking and complete resection, offering low morbidity and excellent functional preservation. Low-grade MEC carries a favorable long-term prognosis when complete resection is achieved.

Conclusion

Tracheal low-grade MEC should be considered in children with persistent wheezing unresponsive to appropriate asthma therapy. Early bronchoscopy can facilitate both diagnosis and treatment, and bronchoscopic cryotherapy may offer a minimally invasive option for selected endoluminal tumors.

Keywords

Persistent wheeze, Mucoepidermoid carcinoma, Bronchoscopy

KIOSK C: DOLPHIN



KIOSK C: DOLPHIN

31 October 2026, 11:00 – 11:30

#18

CASE REPORT: PEDIATRIC PULMONARY ACTINOMYCOSIS MIMICKING MALIGNANCY AND TUBERCULOSIS: A DIAGNOSTIC DILEMMA

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Background

Pulmonary actinomycosis is a rare, chronic suppurative infection caused by anaerobic/microaerophilic filamentous Gram-positive bacteria of the genus *Actinomyces*. It is uncommon in children. Thoracic involvement with paraspinal extension and rib destruction is particularly rare, posing substantial diagnostic challenges as it can closely mimic malignancy or tuberculosis.

Case Presentation

We report an 11-year-old healthy Chinese girl presented with persistent non-productive cough, weight loss, night sweats and a rapidly enlarging right posterior chest wall mass. The condition was initially discovered during evaluation for new-onset scoliosis. Thoracic MRI and high-resolution CT revealed an extensive paraspinal abscess spanning T1–T12, a fistulous tract to the pleural space, and destructive “moth-eaten” lytic changes of the 4th–9th ribs, prompting concern for malignancy or tuberculosis. Comprehensive testing for bacterial pathogens, mycobacteria, fungi, and primary immunodeficiency were unrevealing. Fine-needle aspiration of the chest wall mass yielded purulent material, with cytology showing Gram-positive, Periodic acid–Schiff-positive, and Grocott-positive filamentous organisms consistent with *Actinomyces*. In contrast, 16S rRNA/metagenomic sequencing identified *Fusobacterium* species without detectable *Actinomyces* DNA. The patient was treated non-surgically with stepwise antibiotics, including intravenous ceftriaxone, followed by prolonged oral amoxicillin, and a course of metronidazole targeting the companion anaerobe. She achieved complete clinical and radiological resolution, with healing of rib lesions and normalization of spinal alignment.

Conclusion

Thoracic actinomycosis should be considered in children presenting with destructive chest wall masses and constitutional symptoms, even without obvious immunodeficiency. Its polymicrobial nature may complicate microbiological diagnosis. Histopathological confirmation remains central in guiding the organ-preserving antimicrobial therapy to avoid unnecessary surgical resection.

#24

PATIENT-REPORTED OUTCOME MEASURES (PROMS) FOR ASSESSING QUALITY OF LIFE IN CHILDREN WITH POST-TUBERCULOSIS LUNG DISEASE (PTLD): A SYSTEMATIC SCOPING REVIEW

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Background and Aims

Post-tuberculosis lung disease (PTLD) is an increasingly recognized long-term consequence of pulmonary tuberculosis in children. Although pulmonary function tests and imaging characterize structural and functional impairment, they do not adequately capture quality of life. Patient-reported outcome measures (PROMs), may complement clinical assessment; however, no consensus exists regarding their use in pediatric PTLD. This scoping review systematically mapped the available evidence on HRQoL assessment in children with PTLD, identified the instruments used, and examined their reported domains and evidence gaps.

Methods

A PRISMA-ScR-guided scoping review was conducted. PubMed, Scopus, and Web of Science were searched for studies published between 2016 and 2026. Eligible studies included children and adolescents (0–18 years) with PTLD or persistent respiratory sequelae after completion of PTB treatment who reported PROMs. Data on study characteristics, PTLD definitions, HRQoL instruments, assessed domains, pediatric applicability, and associations with objective pulmonary outcomes were extracted and synthesized narratively.

Results

Of 1,138 records identified, four cross-sectional studies met the inclusion criteria. Three PROMs were identified: the SGRQ, Pediatric Quality of Life Inventory (PedsQL), and Short Form-36 (SF-36). Marked heterogeneity in instrument selection, domains, scoring, and outcome reporting limited cross-study comparison. PedsQL was the only pediatric-specific instrument, and no measure had been developed or validated specifically for pediatric PTLD.

Conclusion

Current evidence highlights a critical gap in HRQoL assessment for pediatric PTLD. Developing and validating disease-specific pediatric PROMs should be a research priority to enable comprehensive evaluation of long-term outcomes and advance patient-centered care.

#28

**ANTIBIOTIC PRESCRIBING PRACTICES AND
NASOPHARYNGEAL BACTERIAL DETECTION AMONG
CHILDREN HOSPITALIZED WITH RSV BRONCHIOLITIS IN
VIETNAM**

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Methods

An observational study was conducted in 95 children hospitalized with respiratory syncytial virus (RSV) bronchiolitis at Phenikaa University Hospital between October 2025 and April 2026. Data collected included antibiotic use before and during hospitalization, route of administration, nasopharyngeal bacterial culture results, disease severity, oxygen requirement, and length of hospital stay. Nasopharyngeal bacterial growth was considered evidence of upper airway bacterial colonization rather than confirmed lower respiratory bacterial co-infection.

Results

Of the 95 children, 92 (96.8%) received systemic antibiotics during hospitalization, including 81 (85.2%) who received oral antibiotics. Thirty children (31.6%) had received antibiotics before admission, and antibiotic therapy was continued in all of them after hospitalization. No association was found between pre-admission antibiotic use and disease severity. Nasopharyngeal bacterial growth was detected in 70.5% of patients, with *Streptococcus pneumoniae* (29.5%), *Moraxella catarrhalis* (22.1%), and *Haemophilus influenzae* (15.8%) being the most common organisms. Nasopharyngeal bacterial detection was not associated with oxygen requirement, disease severity, or length of hospital stay.

Conclusions

Antibiotic use was highly prevalent among children hospitalized with RSV bronchiolitis, particularly among those who had received antibiotics before admission. Because nasopharyngeal bacterial detection does not confirm lower respiratory bacterial infection, standardized criteria for initiating and reassessing antibiotic therapy are needed to promote antimicrobial stewardship and reduce unnecessary antibiotic use.

KIOSK C: DOLPHIN
31 October 2026, 11:00 – 11:30

#36

DIAGNOSTIC CHALLENGES OF HIGH-BACILLARY PULMONARY TUBERCULOSIS IN AN IMMUNOCOMPROMISED ADOLESCENT: A CASE OF SYSTEMIC LUPUS ERYTHEMATOSUS AND SEVERE MALNUTRITION

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Background

Tuberculosis (TB) remains a major cause of morbidity in immunocompromised children, where atypical manifestations and impaired cellular immunity often delay diagnosis. Patients with systemic lupus erythematosus (SLE) receiving long-term immunosuppressive therapy are particularly vulnerable, while malnutrition can further obscure the clinical picture.

Case Presentation

A 17-year-old girl with established SLE receiving high-dose methylprednisolone followed by maintenance mycophenolate mofetil, methotrexate, hydroxychloroquine, and tapering prednisone presented with prolonged fever, chronic cough, malar rash, oral ulceration, and severe marasmic malnutrition. Tuberculin skin testing was non-reactive, and chest radiography suggested lobar pneumonia. Despite these findings, persistent clinical suspicion prompted sputum Xpert MTB/RIF Ultra, which detected rifampicin-sensitive *Mycobacterium tuberculosis* with a high bacillary load. Anti-TB therapy was initiated while SLE treatment continued with close multidisciplinary monitoring. The patient demonstrated a favorable clinical response after initiation of anti-TB therapy, including resolution of fever, marked reduction in cough and constitutional symptoms, improved functional status, and progressive weight gain during follow-up.

Conclusion

Severe immunosuppression due to SLE, prolonged immunosuppressive therapy, and severe malnutrition mask the classic presentation of pulmonary TB, leading to false-negative tuberculin skin tests and nonspecific radiographic findings. Pulmonary tuberculosis should not be ruled out in immunocompromised adolescents solely on the basis of a negative tuberculin skin test or nonspecific radiographic findings. Early molecular confirmation with Xpert MTB/RIF Ultra, followed by timely multidisciplinary management, allows for appropriate treatment and a good initial clinical response.

KIOSK C: DOLPHIN
31 October 2026, 11:00 – 11:30

#37

MALIGNANT PERTUSSIS IN CHILDREN: A RETROSPECTIVE COHORT STUDY AT A TERTIARY HOSPITAL IN BANDUNG, INDONESIA

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Background

Pertussis is a major cause of infant mortality, particularly its severe form, malignant pertussis. Despite rising hospitalizations during the post-COVID-19 resurgence in West Java, Indonesia, local data on this phenotype remain scarce.

Methods

We conducted a retrospective cohort study of children hospitalized with pertussis (ICD-10 code: A37) at Hasan Sadikin General Hospital, a tertiary hospital, between 2020 and 2025. Malignant pertussis was defined as pertussis accompanied by respiratory failure, hyperleukocytosis ($>50,000$ cells/ μL), pulmonary hypertension, and cardiovascular instability. Laboratory confirmation was performed via Bordet–Gengou culture before 2024 and polymerase chain reaction (PCR) thereafter. Categorical variables were analyzed using chi-square or Fisher's exact tests, and continuous variables via Mann–Whitney U test (significant set at $p < 0.05$).

Results

Among 142 hospitalized children with pertussis, admissions increased from 13 in 2020 to 37 in 2024. Infants aged <12 months accounted for 69.0% of cases, and 27 (19.0%) had malignant pertussis. Laboratory confirmation was obtained in five patients (3.5%), all by PCR. The malignant pertussis group had significantly higher peak leukocyte counts ($86,096 \pm 25,928$ vs. $20,055 \pm 11,143$ cells/ μL) and lymphocyte counts ($42,822 \pm 18,947$ vs. $9,089 \pm 6,948$ cells/ μL) (both $p < 0.001$). Complications and unvaccinated cases were significantly higher in the malignant pertussis group, which also accounted for all deaths.

Conclusions

Malignant pertussis accounted for one-fifth of totally hospitalized pertussis cases but was responsible for all deaths and the majority of complications. Early recognition of hyperleukocytosis and improved age-appropriate vaccination coverage are essential to reduce severe disease and mortality.

KIOSK C: DOLPHIN
31 October 2026, 13:15 – 14:00

#10

**APPLICATION OF THE PHOENIX SEPSIS SCORE FOR
DIAGNOSING SEPSIS IN CHILDREN WITH MEASLES**

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Objective

To assess the prevalence of sepsis and septic shock in children with complicated measles using the Phoenix Sepsis Score within the first 24 hours of admission to the Infectious Diseases Intensive Care Unit (IDICU).

Design

Prospective observational cohort study.

Setting:

IDICU at Children's Hospital 1, Ho Chi Minh City, Vietnam, from June to December 2024.

Patients

A total of 161 children aged 1 month to 16 years with measles-associated complications.

Interventions

None.

Measurements And Main Results

The median age was 9 months (IQR: 6–21), with 49.7% under 9 months. The male-to-female ratio was 1.99:1. Malnutrition was present in 45% of patients. Other comorbidities included preterm birth (22%), cyanotic congenital heart disease (3.7%), chronic lung disease (3.1%), and thrombocytopenia (2.4%). Sepsis occurred in 30.4% (n=49), with 24.5% progressing to septic shock. Children with sepsis were older (median 19 vs. 8 months) and more likely to be malnourished (63.3% vs. 36.6%). They required more invasive respiratory support (55.1% vs. 2.7%), had longer hospital stays (median 8 vs. 6 days), and higher mortality (6.8% vs. 0%). All deaths occurred in the sepsis group. Respiratory criteria predominated among patients with a Phoenix Sepsis Score ≥ 1 .

Conclusions

Sepsis and septic shock are common in children with complicated measles, with prevalences of 30.4% and 7.5%, respectively. Older age, malnutrition, and need for respiratory support are associated with increased risk. Sepsis is linked to greater morbidity and mortality.

#42

CHRONIC GRANULOMATOUS INFLAMMATION UNVEILS PEDIATRIC TUBERCULOUS PERICARDITIS: A CASE REPORT

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Background

Tuberculous pericarditis (TP) is a rare form of extrapulmonary tuberculosis in children. The disease can present with nonspecific symptoms, and microbiological confirmation is often negative, making diagnosis difficult. Delayed diagnosis can lead to cardiac tamponade, constrictive pericarditis, and increased mortality.

Case Presentation

A 10-year-old girl who presented with progressive dyspnea caused by massive pericardial effusion with impending cardiac tamponade and systemic venous congestion. Emergency pericardiocentesis was performed. Although microbiological studies and the tuberculin skin test were negative, pericardial fluid analysis and cytological examination demonstrated exudative effusion with chronic granulomatous inflammation, supporting a diagnosis of probable tuberculous pericarditis. The patient was treated with adult-dose anti-tuberculosis therapy and colchicine, resulting in complete resolution of pericardial effusion, recovery of right ventricular function, and marked clinical improvement.

Conclusion

Tuberculous pericarditis should be considered in children with unexplained exudative pericardial effusion and signs of right-sided heart failure, particularly in TB-endemic regions. Negative acid fast bacille (AFB), culture, and tuberculin skin test do not exclude tuberculous. In this case, clinico-pathologic correlation is essential to establish a diagnosis of probable tuberculous pericarditis. Early pericardiocentesis, anti tuberculosis drug therapy and colchicine improves outcomes and helps prevent life-threatening complications.

KIOSK C: DOLPHIN

31 October 2026, 13:15 – 14:00

#63

OVERTHINKING A CHILD WITH A NASOPHARYNGEAL MASS IN A TB-ENDEMIC REGION: CARCINOMA OR TUBERCULOSIS?

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Background

While pulmonary tuberculosis (TB) as the majority of global health problem, extrapulmonary manifestations are less frequent but can mimic malignancy, creating diagnostic challenges, particularly in endemic regions. We described the malignancy appearance of nasopharyngeal mass cause by M.tuberculosis.

Case Presentation

We report a 14-year-old boy with a two-year history of cervical lymphadenopathy and subsequent axillary lymph node enlargement, accompanied by constitutional symptoms, like recurrent low-grade fever, weight loss of approximately 1–2 kg within one month, and complaints of fatigue and weakness. The mother had a history of tuberculosis treatment for six months when the patient was two months old. Investigations showed a chest X-ray within normal limits, with no evidence of pulmonary metastasis. A molecular rapid test (TCM) of sputum detected Mycobacterium tuberculosis at a very low level, with no rifampicin resistance. The Mantoux test revealed a 12 mm induration, interpreted as positive. A contrast-enhanced CT scan of the neck demonstrated an inhomogeneous isodense mass at the roof of the right nasopharyngeal cavity, obliterating the Rosenmüller fossa and right torus tubarius, along with enlarged cervical lymph nodes at levels 3–4. These findings were suggestive of nasopharyngeal carcinoma with cervical lymphadenopathy. Anti-tuberculosis therapy was initiated, resulting in clinical improvement and regression of lymph node size within two weeks.

Conclusion

Tuberculosis should be considered in the differential diagnosis of nasopharyngeal masses in endemic regions. Patient education on the importance of biopsy is crucial to exclude malignancy, prevent misdiagnosis, and ensure timely treatment.

KIOSK C: DOLPHIN

31 October 2026, 13:15 – 14:00

#66

BEYOND THE RASH: OUTCOMES AND RISK FACTORS OF MEASLES-ASSOCIATED PNEUMONIA IN CHILDREN FROM DR. M. DJAMIL GENERAL HOSPITAL, PADANG, INDONESIA

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Background

Measles is a highly contagious respiratory infection with significant transmission risk and serious complications, but vaccine-preventable disease. However, measles vaccination coverage in Padang in 2024 was only 51,2% reported.

Objective

To characterize the risk profile and outcomes of pediatric patients of measles complicated by pneumonia at RSUP Dr. M. Djamil Padang.

Methods

A descriptive retrospective study was conducted on pediatric patients hospitalized with measles complicated by pneumonia at the PICU and pediatric ward of Dr. M. Djamil Hospital, between May 2025 and May 2026, in Padang, Indonesia. We analyzed variables including sex, age group, nutritional status, measles vaccination status, clinical signs, maximal oxygen device, and clinical outcome.

Results

A total of 29 patients were hospitalized at our hospital during 1 year with measles complicated by pneumonia. Most patients were male (69%), predominantly in the 1-4-year-old group (62,1%). The highest incidence was in December 2025 (41,4%), coinciding with floods and landslides in West Sumatra in November 2025. The majority of nutritional status was moderate acute malnutrition (51,7%). All patients had clinical symptoms of fever and cough, and 72,4% had respiratory distress. The majority of them were unvaccinated, including measles (62,1%), and they had respiratory distress with maximal oxygen device on CPAP (44,4%). Clinical outcomes in patients were 86,2% recovered/ discharged, 10,3% death, and 3,4% against medical advice.

Conclusions

Pneumonia remains the most common complication of measles. The major challenge is to reach the WHO target of 95% immunization coverage.

KIOSK C: DOLPHIN

31 October 2026, 13:15 – 14:00

#38

PROFILE OF POST-INFECTIOUS BRONCHIOLITIS OBLITERANS IN INDONESIAN CHILDREN: A 5-YEAR RETROSPECTIVE STUDY AT A TERTIARY HOSPITAL

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Background

Bronchiolitis obliterans (BO) is a irreversible obstructive disease of small airways, commonly due to post-infectious BO (PIBO), which remains challenging to diagnose and often associated with poor outcomes.

Objective

Describe the characteristics, diagnostic features, and outcomes of children with PIBO in Indonesia.

Methods

Retrospective review of medical records of pediatric patients diagnosed with PIBO at Cipto Mangunkusumo Hospital, from January 2021 to June 2026.

Results

Five children were diagnosed with PIBO, all male and under 5 years old (11–42 months at diagnosis). All were born at term; two had low birth weight. Basic immunization was incomplete in three subjects, none had Influenza vaccine. Comorbidities were present in three subjects, each was atrial septal defect, cerebral palsy, and Down syndrome. All had oxygen dependency after respiratory infection, prompting evaluation for PIBO, confirmed by thorax CT scan in all cases: bronchial wall thickening was universal, while mosaic attenuation, bronchiectasis, and ground-glass opacity were each present in three subjects. The earliest time to diagnosis was 1 month and the latest was 12 months, as it was shorter as more recent. Only two subjects with confirmed antecedent infection (measles pneumonia and RSV bronchiolitis). Three subjects received methylprednisolone pulse therapy, and all received inhaled corticosteroids and long-term azithromycin. At follow-up, two subjects were weaned off oxygen, two remained oxygen-dependent, and one deceased.

Conclusion

PIBO should be suspected in children with oxygen dependency and antecedent respiratory infection. Combination treatment with methylprednisolone pulse, inhaled corticosteroids, and long-term azithromycin may be associated with improved respiratory outcomes.

KIOSK C: DOLPHIN

31 October 2026, 13:15 – 14:00

#39

NAVIGATING PEDIATRIC HOME CARE IN A TERTIARY HOSPITAL IN INDONESIA: A 5-YEAR COLLABORATION WITH A NON-PROFIT HOME-BASED PEDIATRIC PALLIATIVE CARE

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Background

As survival rates for children with complex, life-limiting illnesses increase, the transition from tertiary hospital to home care requires seamless continuity. Home-based pediatric palliative care (PPC) is vital for symptom management, particularly for children with chronic respiratory failure. However, integrated PPC remains scarce in Indonesia and is not covered by national health insurance.

Objective

Describe demographics, respiratory care requirements, and clinical challenges of pediatric patients managed under a collaborative tertiary hospital and a non-profit home-based PPC service.

Method

Retrospective medical record review of children under the joint care of Cipto-Mangunkusumo Hospital and Rachel House from January 2021 to June 2026.

Result

Over the 5-year period, five patients (80% male) residing in Jakarta received home-based PPC. Diagnoses were bronchiectasis, short rib thoracic dysplasia, hypoxic-ischemic encephalopathy, paraparesis from cervical tuberculosis spondylitis, and spinal muscular atrophy. Notably, all five patients required advanced respiratory interventions: three were tracheostomized, three required home mechanical ventilation, one utilized BiPAP, and one required long-term oxygen therapy. Only two subjects with artificial feeding aid, each nasogastric tube and percutaneous endoscopic gastrostomy. Home care duration ranged from 3 months to 4 years. Primary challenges identified were the lack of government financial support for specialized respiratory service, equipment (ventilator, oxygen refills) and medical transport; also, significant caregiver emotional burden and service limitations. Conclusion: Complex and chronic pediatric patients required intensive and/or long-term respiratory support need seamless transition of care from hospital to home, thus structural integration of home-care/PPC and specialized service of is urgently needed and recognized by local authorities

KIOSK C: DOLPHIN
31 October 2026, 13:15 – 14:00

#57

**NITRIC ACID-INDUCED BRONCHIOLITIS OBLITERANS IN MICE:
A REPRODUCIBLE MODEL OF AIRWAY FIBROSIS AND LUMINAL
OCCLUSION**

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Background

Bronchiolitis obliterans (BO) is a severe and rare disorder with an incompletely understood pathogenesis and a lack of effective therapeutic interventions.

Methods

In this study, we developed a murine model of airway injury and repair by intratracheal instillation of nitric acid at varying concentrations (0.5%, 0.75%, and 1%; 2 μ L/g) in C57BL/6N mice. Saline was administered to the control group. Lung tissue pathology was evaluated at days 7 (D7), 14 (D14), 21 (D21), and 28 (D28) post-instillation to determine the optimal nitric acid concentration for establishing a stable BO model.

Results

The 1.0% nitric acid group exhibited a cumulative mortality rate of 31.25%, with 2 deaths occurring on the day of instillation, 2 during the first week, and 1 in the third week. No mortality was observed in other groups. In the 0.75% nitric acid group, histopathological analysis on day 28 revealed inflammatory cell infiltration, granulation tissue hyperplasia, and peribronchiolar fibrosis, resulting in complete bronchiolar lumen occlusion and disruption of normal alveolar architecture. The 1.0% nitric acid group demonstrated severe pulmonary damage, including tissue fusion, blurred alveolar-bronchiolar boundaries, and extensive accumulation of red blood cells and inflammatory cells, indicative of pulmonary hemorrhage. Persistent inflammation and partial pulmonary fibrosis were observed in the later stages.

Conclusion

Intratracheal instillation of 0.75% nitric acid (2 μ L/g) for 28 days effectively induced bronchiolar occlusion and peribronchiolar fibrosis in mice, recapitulating the hallmark pathological features of BO. This model is well-suited for experimental applications and provides a valuable tool for further investigations into BO.

KIOSK C: DOLPHIN

31 October 2026, 15:15 – 15:45

#47

IMPROVING VACCINATION UPTAKE IN CYSTIC FIBROSIS: THE ROLE OF VACCINE MISTRUST AND QUALITY IMPROVEMENT INTERVENTIONS

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Background

Cystic fibrosis (CF) is associated with an increased risk of respiratory infections, and both influenza and pneumococcal vaccinations are recommended. However, uptake remains low, and the role of vaccine attitudes is incompletely understood. Prompted by initial low coverage and attitudinal barriers, quality improvement initiatives were subsequently initiated.

Methods

This study evaluated 471 individuals with CF at a tertiary center. Initial 2024–2025 influenza and pneumococcal vaccination statuses were obtained from national immunization records. Vaccine attitudes were assessed using the Vaccination Attitudes Examination (VAX) scale, and clinical data were retrieved from the database. Quality improvement interventions for both vaccines were subsequently implemented.

Results

Baseline influenza and pneumococcal vaccination uptake rates were 12.1% and 5.3%, respectively. Vaccinated patients had significantly lower mistrust scores ($p=0.006$). Higher vaccine mistrust was independently associated with lower baseline influenza uptake (adjusted OR 0.67, 95% CI 0.50–0.90, $p=0.008$). Lower household income correlated with higher mistrust ($p=0.013$). Following quality improvement initiatives, influenza coverage increased to approximately 45%, and pneumococcal coverage reached approximately 50%, with optimization processes still ongoing.

Conclusions

Baseline immunization rates were low among individuals with CF, with vaccine mistrust acting as an independent barrier. Targeted quality improvement interventions successfully raised influenza coverage to ~45% and pneumococcal coverage to ~50%, while ongoing processes continue. Addressing trust-related concerns proves effective, highlighting the need for sustained efforts across all recommended immunizations.

#64

PULMONARY ACTINOMYCOSIS IN CHILDREN: A RARE CAUSE OF CAVITARY LUNG DISEASE AND HEMOPTYSIS

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Background

Pulmonary actinomycosis is a rare, chronic suppurative infection caused by anaerobic Actinomyces species, which are commensals of the oropharyngeal flora. In children, it is frequently underdiagnosed due to its indolent course and nonspecific clinical and radiological features that closely mimic pulmonary tuberculosis and fungal infections, leading to delayed diagnosis and inappropriate treatment.

Methods

We report a case of pulmonary actinomycosis in a 13-year-old immunocompetent girl, focusing on clinical presentation, radiological findings, diagnostic challenges, and management. Clinical records, imaging studies, microbiological workup, surgical findings, and histopathological examination were reviewed.

Results

The patient presented with a two-month history of productive cough, a one-month history of fever, and a ten-day history of hemoptysis. Chest radiography revealed right upper lobe consolidation, while computed tomography demonstrated a thick-walled cavitary lesion with an air-crescent sign, raising suspicion of pulmonary tuberculosis or aspergilloma. Tuberculosis screening was negative, and the patient failed to respond to broad-spectrum antibiotics and antifungal therapy. Due to persistent symptoms, a right upper lobectomy was performed. Histopathological examination of the resected lung tissue revealed sulfur granules composed of filamentous, branching, Gram-positive bacilli with peripheral eosinophilic clubbing, confirming pulmonary actinomycosis. The patient was treated with prolonged oral amoxicillin-clavulanic acid, resulting in complete clinical and radiological recovery.

Conclusion

Pulmonary actinomycosis should be considered in the differential diagnosis of cavitary lung lesions in children, even in immunocompetent patients. Histopathological confirmation is crucial due to its close radiological resemblance to tuberculosis and fungal infections.

#65

PROGRESSIVE RESPIRATORY FAILURE AFTER PEDIATRIC BARIUM SULFATE ASPIRATION: A CASE REPORT AND LITERATURE REVIEW

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Introduction

Barium sulfate aspiration is an uncommon complication of contrast swallow studies in children. Clinical severity varies widely, and evidence to guide management remains limited. We described an infant who developed delayed respiratory deterioration after barium sulfate aspiration and reviewed published pediatric cases to examine clinical presentation, management, and outcomes.

Methods

We reported the clinical course of a 13-month-old infant who aspirated barium sulfate during an upper gastrointestinal contrast study. Clinical findings, imaging, bronchoscopy, bronchoalveolar lavage, microbiological results, treatment, and outcome were collected. We also performed a literature review of published pediatric cases identified through PubMed.

Results

The infant remained clinically stable immediately after aspiration but developed progressive respiratory distress within 24 hours and required supplemental oxygen. Emergency bronchoscopy with bronchoalveolar lavage was performed because of worsening respiratory status. Chest radiography showed marked improvement after the procedure, and oxygen therapy was discontinued within 24 hours. Bronchoalveolar lavage culture was negative, whereas multiplex PCR detected *Staphylococcus aureus* and *Escherichia coli*. The patient recovered completely and was discharged on day 6. Review of published pediatric cases identified only a small number of reported patients, all of whom survived despite differences in the use of bronchoscopy, bronchoalveolar lavage, and antibiotics.

Conclusions

Barium sulfate aspiration in children may lead to delayed respiratory deterioration despite initial clinical stability. Careful observation during the first 24 hours is warranted. Decisions regarding bronchoscopy should be guided by clinical progression rather than radiographic findings alone, while the role of bronchoalveolar lavage and antibiotic therapy remains individualized.

KIOSK C: DOLPHIN

31 October 2026, 15:15 – 15:45

#71

OVERVIEW OF SELECTIVE NATIONAL GUIDELINES AND CLINICAL RECOMMENDATIONS FOR CHILDHOOD RESPIRATORY SYNCYTIAL VIRUS (RSV) PROPHYLAXIS: A HONG KONG PERSPECTIVE FOR ASIA

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Background

Respiratory Syncytial Virus (RSV) is a leading cause of lower respiratory tract infections in infants and young children worldwide. However, clinical guidelines across Asia remain heterogeneous, and parental hesitancy continues to limit uptake.

Methods

A narrative review of published guidelines, policy documents, and clinical recommendations from Hong Kong and selected Asian countries was conducted. Comparative analysis focused on prophylaxis strategies, target populations, and implementation challenges. Based on this synthesis, we developed the ABC mnemonic to facilitate recall and communication among clinicians and families.

Results

Antenatal vaccine: Maternal immunization during pregnancy, exemplified by Abrysvo, is recommended in several high-income settings but remains under consideration in Hong Kong and neighboring regions. Evidence supports transplacental antibody transfer, reducing RSV hospitalization in newborns.

Baby after Birth: Long-acting monoclonal antibodies such as nirsevimab (Beyfortus) provide direct infant protection for up to five months, covering the peak RSV season. While approved in Europe and the United States, access in Asia is limited by cost and regulatory timelines.

Counselling: Parental education emerged as a critical determinant of uptake. Misconceptions about vaccine safety and uncertainty regarding timing hinder implementation. Structured counselling strategies can bridge scientific advances with family decision-making, ensuring continuity of care from pregnancy to infancy.

Conclusion

By integrating antenatal and postnatal interventions within a simple communication framework, the ABC approach bridges science and public health messaging, fostering broader acceptance and uptake.

#77

SMALL PULMONARY ARTERIOVENOUS MALFORMATIONS PRESENTING AS RECURRENT HEMOPTYSIS IN AN ADOLESCENT: A DIAGNOSTIC CHALLENGE

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Background

Pulmonary arteriovenous malformations (PAVMs) are uncommon in children and are typically suspected in the presence of hypoxemia, cyanosis, or other manifestations of right-to-left shunting. Small PAVMs, however, may lack these classic features and remain undetected during routine evaluation.

Case Presentation

A 16-year-old girl presented with a 7-month history of intermittent, non-massive hemoptysis. She had no dyspnea, cyanosis, digital clubbing, mucocutaneous telangiectasia, or family history suggestive of hereditary hemorrhagic telangiectasia. Room-air oxygen saturation was 97%. Complete blood count, coagulation studies, chest radiography, and investigations for pulmonary tuberculosis were unremarkable. Bronchoscopy showed no bleeding or endobronchial lesion. Because hemoptysis remained unexplained, CT pulmonary angiography was performed and demonstrated four small (0.8-1.5mm) PAVMs in the posterior basal segment of the left lower lobe, with adjacent ground-glass opacities suggestive of pulmonary hemorrhage. Bronchoalveolar lavage from the same region showed numerous hemosiderin-laden macrophages, supporting previous alveolar bleeding. The feeding arteries of PAVMs were considered too small for immediate embolization, and radiological surveillance was planned.

Discussion

This case illustrates that small PAVMs may present primarily with recurrent hemoptysis despite normal oxygen saturation and absence of typical clinical features of right-to-left shunting. Importantly, routine CXR and bronchoscopy may be unrevealing. The concordance between localized PAVMs, adjacent ground-glass opacities, and hemosiderin-laden macrophages provided evidence linking the vascular abnormalities to recurrent pulmonary hemorrhage.

Conclusion

Small PAVMs should be considered in adolescents with recurrent unexplained hemoptysis even when oxygenation, chest radiography, and bronchoscopy are normal. CT pulmonary angiography may reveal clinically significant vascular lesions that would otherwise remain occult.

KIOSK C: DOLPHIN

1 November 2026, 10:30 – 11:00

#130

CLINICAL SPECTRUM AND THERAPEUTIC OUTCOMES OF EMPYEMA THORACIS IN CHILDREN: A SINGLE-CENTER CASE SERIES FROM EASTERN INDIA

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Background

Empyema thoracis remains an important cause of prolonged hospitalization and morbidity in children despite advances in antimicrobial therapy. Its clinical presentation, microbiological yield, and optimal management strategies remain varied. This case series describes the clinico-epidemiological profile, laboratory and microbiological findings, treatment strategies, and outcomes of children managed for empyema thoracis at a tertiary care center in Eastern India.

Methods

It is a 6-year retrospective analysis of children presenting with confirmed empyema thoracis, presenting to our tertiary care referral center.

Results

This case series analyzed 23 children with confirmed empyema thoracis. Mean age was 6.9 years (range 0.8–14), with a male predominance (1.3:1); most patients were referred from outside facilities after a median of 10 days of symptoms. Fever, cough, and dyspnea were the predominant presenting symptoms. Laboratory findings showed anemia, leukocytosis, and thrombocytosis in >50% of patients. Culture positivity was low (35%). *Streptococcus pneumoniae* and MRSA were the most common organisms. Management was predominantly conservative: 91% required chest tube drainage, and intrapleural streptokinase resulted in resolution in most cases. Open decortication was needed in 25%, usually after failed fibrinolysis. Outcomes were favorable overall, with no recorded mortality and a median hospital stay of 16 days.

Conclusion

This case series suggests that a conservative approach with antibiotics, chest tube drainage, and intrapleural fibrinolysis achieves resolution in the majority of children with empyema without the need for surgery, which may be reserved for refractory cases, though larger multicentric studies are needed to validate these findings.

KIOSK C: DOLPHIN

1 November 2026, 10:30 – 11:00

#147

UNRAVELING PROGNOSTIC FACTORS OF SEVERE DENGUE— A CROSS-SECTIONAL STUDY

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Objectives

Dengue fever is an endemic disease that occurs in various regions throughout the year and remains a major concern in child health in Indonesia, contributing to increased morbidity, mortality, and overload of health service capacity. Severity is commonly assessed through clinical manifestations and laboratory tests, but the Neutrophil–Lymphocyte Ratio (NLR), Monocyte–Lymphocyte Ratio (MLR), and Platelet–Lymphocyte Ratio (PLR) have emerged as promising predictors of severity, particularly in resource-limited settings. This study aimed to determine the prognostic factors of dengue infection.

Methods

This cross-sectional observational study reviewed medical records of children aged 1–18 years with dengue infection treated at Soehadi Prijonegoro Sragen Regional General Hospital according to the WHO 2009 criteria. All patients were confirmed by serological markers (dengue IgM/IgG). Spontaneous bleeding and laboratory examinations, including complete blood count, NLR, MLR, and PLR, were compared between non-severe and severe dengue patients. Data were analyzed using the independent t-test, Mann–Whitney test, and chi-square test.

Results

There were 235 subjects with non-severe dengue infection and 28 with severe dengue infection. On bivariate analysis, significant differences were found in NLR ($p = 0.039$), MLR ($p = 0.023$), PLR ($p = 0.000$), and hematocrit ($p = 0.000$) between the severe and non-severe dengue infection groups, as well as in the variables spontaneous bleeding ($p = 0.003$, RR = 2.500) and leukopenia ($p = 0.012$, RR = 2.513).

Conclusion

Neutrophil–Lymphocyte Ratio (NLR), Monocyte–Lymphocyte Ratio (MLR), and Platelet–Lymphocyte Ratio (PLR) were significant prognostic factors in severe dengue infection in children.

KIOSK C: DOLPHIN

1 November 2026, 10:30 – 11:00

#99

NURSE-LED DIGITAL ASTHMA MANAGEMENT IN ROUTINE PEDIATRIC CARE: A REAL-WORLD COHORT STUDY

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Background/Purpose

Childhood asthma control remains suboptimal, and evidence on nurse-led digital management in routine care is limited. We evaluated feasibility, engagement, longitudinal asthma control, and factors associated with asthma control over time.

Methods

In this single-center prospective real-world cohort, 135 children with asthma and their caregivers were recruited from a pediatric respiratory outpatient clinic between April 2023 and December 2024 and followed for up to 12 months. The care model included caregiver education, scheduled follow-up, video-based inhaler technique assessment, and individualized nurse feedback via a cloud platform. Outcomes were assessed at baseline and at 1, 3, 6, 9, and 12 months. Retention and digital activity completion were implementation outcomes. Generalized estimating equations were used to analyze repeated asthma-control data.

Results

Retention declined from 84.4% at 1 month to 39.3% at 12 months. Completers had better baseline inhaled corticosteroid adherence than non-completers, 64.2% versus 18.3%, $P<0.001$. Among engaged families, video-upload completion reached 100% from month 3, with feedback for all submitted videos. Caregiver knowledge, adherence, and inhaler technique improved, all $P<0.001$. Well-controlled asthma increased from 45.2% to 77.2%–94.0%. Better control was associated with longer follow-up and cumulative inhaled corticosteroid use; poorer control was associated with more prior episodes and greater caregiver concern.

Conclusions

This nurse-led digital model was feasible and associated with improved asthma-related behaviors and asthma control among retained participants. Limited retention and adherence-related attrition suggest possible selection bias, highlighting the need for retention strategies and sensitivity analyses.

KIOSK C: DOLPHIN

1 November 2026, 10:30 – 11:00

#101

MICROBIAL LANDSCAPE AND ANTIMICROBIAL RESISTANCE IN CHILDREN WITH PARAPNEUMONIC EFFUSION

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Background

Pediatric parapneumonic effusion (PPE) remains an important complication of pneumonia, yet microbiological and antimicrobial resistance (AMR) data from local settings are limited. We aimed to characterize the microbial landscape and AMR patterns of pediatric parapneumonic and evaluate their association with in-hospital mortality.

Methods

We conducted a retrospective cohort study of 67 children hospitalized with PPE at a tertiary referral center in Indonesia. Microbiological findings from blood, respiratory, and pleural fluid specimens were evaluated. Major AMR was defined as detection of methicillin-resistant *Staphylococcus aureus* (MRSA), extended-spectrum β -lactamase (ESBL)-producing organisms, or carbapenem-resistant Enterobacterales (CRE). The association between major AMR and mortality was assessed using Fisher's exact test.

Results

Culture positivity varied by specimen source: 12/54 (22.2%) for blood, 16/18 (88.9%) for respiratory specimens, and 22/44 (50.0%) for pleural fluid. Pleural isolates were predominantly Gram-positive, led by *S. aureus* (n=9), *Streptococcus pneumoniae* (n=4), and *S. constellatus* (n=4). In contrast, respiratory cultures showed a broader Gram-negative spectrum, including *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Enterobacter cloacae*, and *Escherichia coli*. Major AMR phenotypes were identified in 11/67 (16.4%) patients. Mortality was significantly higher among patients with major AMR than among those without documented major AMR (45.5% vs 14.3%; OR 5.00, 95% CI 1.23–20.34; p=0.031).

Conclusion

Pediatric PPE demonstrated a specimen-specific microbial landscape. Major AMR was associated with fivefold higher odds of in-hospital mortality, emphasizing the importance of microbiological sampling, local AMR surveillance, and resistance-guided antimicrobial therapy.

Keywords

parapneumonic effusion; children; microbiology; antimicrobial resistance; mortality; antimicrobial resistance.

KIOSK C: DOLPHIN

1 November 2026, 10:30 – 11:00

#103

ENDOTRACHEAL MASS IN CHILDREN IN INDONESIA; A CASE SERIES

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Background

Endotracheal tumors are very rare in pediatric population. The incidence is 0.2% of all cancer in children. Establishing the diagnosis remains challenging and difficult, given that clinical symptoms closely resemble those of airway obstruction, such as asthma. Flexible bronchoscopy plays a crucial role in diagnosis and management. Delayed diagnosis can lead to fatal outcomes; therefore, a high level of vigilance and clinical suspicion is required.

Methods

We present a case series of endotracheal tumors in four children.

Cases

All of our cases are girls, age 3-year old, 5 year-old, and the other two are 14-year old. They were referred from another hospital with clinical symptoms of severe, worsening respiratory distress. Previously treated as asthma and/or pneumonia. We performed a flexible bronchoscopy procedure and discovered tumor mass in the trachea that was nearly occluding the airway. We performed excision using the APC snare combined with Holmium laser and cryotherapy and released the airway completely. The histological findings were Epstein-Barr virus–associated smooth-muscle tumor (HIV positive), inflammatory myofibroblastic tumor, reactive inflammation lesion and leiomyoma. One girl with HIV has died, while the other child is in good health.

Conclusions

Endotracheal tumors in children are rare but potentially life-threatening conditions, particularly if diagnosis is delayed. Early diagnosis and management can prevent fatal outcomes. Flexible bronchoscopy plays a crucial role in both the diagnosis and treatment of this case.

KIOSK C: DOLPHIN

1 November 2026, 12:45 – 13:30

#94

DOES VITAMIN D3 SUPPLEMENTATION IMPROVE PEDIATRIC ASTHMA CONTROL? A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS

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Background

Asthma is a major cause of pediatric healthcare utilization, with observational evidence linking low vitamin D levels to severe exacerbations and reduced corticosteroid responsiveness. This systematic review evaluated whether vitamin D3 supplementation improves asthma control or reduces hospital-based care and corticosteroid requirements in children.

Methods

A systematic review was conducted of randomized controlled trials involving children aged 1–16 years. Eight articles were included, evaluating vitamin D3 regimens ranging from 800 IU daily to 100,000 IU boluses and intramuscular administration. Outcomes included changes in asthma control scores, particularly the Childhood Asthma Control Test (C-ACT), severe exacerbations, emergency department visits, hospitalizations, systemic corticosteroid use, and inflammatory markers.

Results

Most major RCTs found that while supplementation safely increased serum 25 (OH) D levels, failed to significantly delay the onset of severe exacerbations or improve ACT scores compared to placebo. Conversely, a Japanese RCT reported significant improvements in GINA-defined asthma control and peak expiratory flow. Exploratory biological analysis indicated that high-dose supplementation reduced C-reactive protein and neutrophil counts, suggesting potential immunomodulatory effects. Rapid repletion via bolus initially reduced unplanned visits for severely deficient children (baseline <11 ng/mL) during the first three months, but long-term benefits were not sustained.

Conclusion

Routine vitamin D3 supplementation is not supported for preventing hospitalizations or reducing corticosteroid requirements in the general pediatric asthma population. However, targeted supplementation may provide clinical benefits in selected subgroups, particularly children with severe vitamin D deficiency or inadequate asthma control, while potentially reducing systemic inflammation.

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1 November 2026, 12:45 – 13:30

#120

ALTERATION IN ALANINE AMINOTRANSFERASE AND ITS PREDICTIVE VALUE FOR HEPATOTOXICITY DURING THE INTENSIVE PHASE OF PEDIATRIC TUBERCULOSIS TREATMENT

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Background

Hepatotoxicity is an important adverse effect of antituberculosis therapy in children, but its determinants remain inconsistent and are often extrapolated from adults. This study evaluated changes in alanine aminotransferase (ALT) during the intensive phase and assessed whether baseline ALT predicts subsequent hepatotoxicity.

Methods

This analytical observational study used a paired design to compare serum ALT levels before and after two months of intensive antituberculosis therapy. Medical records of children aged 1–18 years with pulmonary tuberculosis treated at Adam Malik Hospital, Medan, Indonesia, from January 2022 to December 2024 were reviewed. Hepatotoxicity was defined using an upper limit of normal (ULN) of 40 U/L and American Thoracic Society or World Health Organization criteria. Multivariate analysis identified factors associated with hepatotoxicity.

Results

Among 150 children, median ALT increased significantly from 21.0 to 44.5 U/L. Overall, 97.3% experienced an increase in ALT, with 55.3% exceeding the ULN and 24.7% reaching $\geq 2 \times$ ULN. However, formal hepatotoxicity criteria were met in only 7.3% of children. Baseline ALT was the sole significant determinant of subsequent hepatotoxicity. A baseline ALT >40 U/L was associated with an 8.72-fold increased risk of hepatotoxicity.

Conclusion

ALT elevation is common during the intensive phase of antituberculosis therapy in children, whereas clinically significant hepatotoxicity is less frequent. Baseline ALT >40 U/L identifies children at substantially higher risk of hepatotoxicity. Routine liver enzyme monitoring during therapy is warranted, particularly in children with baseline ALT levels at or above the ULN, especially during treatment period.

Keywords

pediatric tuberculosis; hepatotoxicity; alanine aminotransferase; antituberculosis therapy

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1 November 2026, 12:45 – 13:30

#122

BRONCHOSCOPIC INTERVENTION FOR MULTILEVEL AIRWAY OBSTRUCTION DUE TO TRACHEOBRONCHIAL TUBERCULOSIS: A CASE REPORT

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Background

Bronchoscopic evaluation in patient with tuberculosis is indicated in cases of unexplained cough, wheezing, dyspnea or hemoptysis due to possibility of tracheobronchial tuberculosis (TBTB).

Case Description

A 13 y/o girl was referred to our hospital due to worsening of dyspnea and stridor. This girl suffered from productive cough, dyspnea with stridor accompanied by weight loss 1 month prior to TB diagnosis. She had positive TB contact with positive result of IGRA. Radiological finding showed mediastinal mass that compressed trachea and obliterated large mediastinal vein. She was given antituberculosis drugs and symptoms improved. After 4 months adequate treatment, dyspnea and stridor reappeared. She also had limitations in activity and was dependent of low flow oxygen therapy. Bronchoscopy evaluation showed severe stenosis in mid-tracheal level. She then had sequential tracheal dilation using airway balloon and proceeded by cryoablation. She clinically improved with no stridor and was weaned off from oxygen. Four weeks later, as distal airway became accessible, it revealed right upper lobe and intermedius bronchial stenosis which subsequently dilated and repeated procedure was done in another 4 weeks. Afterwards she had normal activity.

Conclusion

To restore airway patency in TBTB, bronchoscopic-guided balloon dilatation can be done as single procedure or may require repeated staged event and might be used in combination with other tool such as electrocautery, APC, laser or cryotherapy.

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1 November 2026, 12:45 – 13:30

#129

DIAGNOSTIC CONCORDANCE BETWEEN INDONESIA'S PEDIATRIC TUBERCULOSIS SCORING SYSTEM AND THE WHO 2022 DIAGNOSTIC ALGORITHM IN CHILDHOOD PULMONARY TUBERCULOSIS

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Background

Childhood tuberculosis (TB) diagnosis in remote area relied on the Indonesian Pediatric Society (IDAI) 2000 scoring system, while World Health Organization (WHO) introduced a revised 2022 algorithm emphasizing bacteriological confirmation together with clinical and radiological criteria. Whether both classify the same children consistently, and how each performs against bacteriological confirmation, remains poorly documented.

Methods

A retrospective cross sectional study was conducted using hospital registry of 60 children aged <10 years old in child health department of Dr. Soetomo General Hospital (January - December 2025). The IDAI 2000 and the WHO 2022 scoring algorithm were analysed using Cohen's kappa and McNemar's test. Sensitivity and specificity was evaluated against bacteriological confirmation (acid-fast bacilli smear microscopy/GeneXpert) among children with a definitive bacteriological result.

Results

IDAI 2000 scoring system and WHO 2022 algorithm demonstrated limited concordance, with 55.0% overall agreement ($\kappa = 0.13$). McNemar's test demonstrated significant discordance between the two approaches ($p = 0.002$), 22 children classified as having TB by WHO algorithm but not by IDAI score, compared with 5 classified conversely. Against bacteriological confirmation, IDAI score demonstrated low sensitivity (29.4%) but higher specificity (75.0%), whereas WHO algorithm showed substantially higher sensitivity (76.5%) with lower specificity (52.2%).

Conclusion

IDAI 2000 scoring system and WHO 2022 algorithm demonstrated slight diagnostic concordance. IDAI system showed higher specificity but lower sensitivity, while WHO algorithm demonstrated higher sensitivity but lower specificity for bacteriologically confirmed tuberculosis. Combining both approaches, rather than relying on either alone, may better balance sensitivity and specificity in pediatric TB diagnosis.

KIOSK C: DOLPHIN

1 November 2026, 12:45 – 13:30

#131

TREATMENT OUTCOMES IN ADOLESCENT TUBERCULOSIS: A RETROSPECTIVE STUDY IN A TERTIARY HOSPITAL IN INDONESIA

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Background

Adolescents with tuberculosis (TB) face distinct adherence challenges, yet adolescent-specific outcome data remain limited. WHO defines treatment success as cure or treatment completion and recognizes loss to follow-up and death as unfavorable outcomes. This study evaluated treatment outcomes and explored demographic associations in adolescents with TB.

Methods

We conducted a retrospective analysis of an anonymized adolescent TB registry in Dr. Soetomo General Hospital (January - December 2025). Treatment success comprised cure or treatment completion; unfavorable outcome comprised treatment failure, death, or loss to follow-up. Patients without a final recorded outcome were excluded from outcome-association analyses. Descriptive statistics, Fisher's exact test, and Mann–Whitney U test were used.

Results

Among 39 adolescents, 35 had a recorded final outcome. Treatment success occurred in 28/35 (80.0%; 95% CI, 64.1–90.0%), while 7/35 (20.0%) had an unfavorable outcome. Unfavorable outcomes included death (3/35, 8.6%), loss to follow-up (3/35, 8.6%), and treatment failure (1/35, 2.9%). All males with recorded outcomes achieved treatment success (14/14, 100%), compared with 14/21 females (66.7%; Fisher's exact $p=0.027$). Median age was 13 years in both outcome groups, with no significant association between age and outcome (Mann–Whitney U, $p=0.717$).

Conclusion

Four in five adolescents with recorded outcomes achieved treatment success, but one in five experienced an unfavorable outcome. The observed sex disparity, driven by unfavorable outcomes among females, is a clinically relevant signal requiring confirmation in larger cohorts. These findings support adolescent-focused retention strategies and prospective evaluation of nutritional, HIV, disease-severity, bacteriological, and respiratory factors.

KIOSK C: DOLPHIN

1 November 2026, 12:45 – 13:30

#132

POST-MEASLES BRONCHIOLITIS OBLITERANS PRESENTING WITH RECURRENT DYSPNEA AND OXYGEN DEPENDENCE: A CASE REPORT

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Background

Post-infectious bronchiolitis obliterans (PIBO) is a rare chronic lung disease. The most common etiologies of bronchiolitis obliterans (BO) include adenovirus, *Mycoplasma pneumoniae*, respiratory syncytial virus (RSV), and other pathogens. Post-measles bronchiolitis obliterans is a rare and potentially underdiagnosed condition in Indonesia.

Method: Case Report

A 1-year-6-month-old boy presented to the pediatric pulmonology division with dyspnea and oxygen dependence. Two months prior to admission, the patient had measles (morbilli) complicated by pneumonia and was hospitalized at a private hospital for 40 days, during which he required supplemental oxygen. The patient had been discharged home for 20 days; however, whenever oxygen supplementation was discontinued, he developed dyspnea and bluish discoloration.

Upon admission to our hospital, the patient had experienced respiratory distress for four days, accompanied by suprasternal and subcostal retractions. Chest X-ray showed pneumonia. Chest multidetector computed tomography (MDCT) demonstrated ground-glass opacities and bronchiolar wall thickening, particularly in the posterior segments of the upper lobes of both lungs. Bronchoscopy showed no airway abnormalities.

The patient was diagnosed with post-infectious bronchiolitis obliterans and treated with inhaled corticosteroids, montelukast, and azithromycin. His dyspnea improved; however, his oxygen dependence persisted.

Result

The presence of recurrent dyspnea and oxygen dependence, combined with chest X-ray findings of pneumonia and chest CT findings of ground-glass opacities and bronchiolar wall thickening, raised suspicion of bronchiolitis obliterans

Conclusion

Bronchiolitis obliterans should be considered in patients with a history of measles who develop persistent or recurrent dyspnea and oxygen dependence.

KIOSK C: DOLPHIN

1 November 2026, 15:15 – 15:45

#136

WHEN CHILDHOOD TUBERCULOSIS DOES NOT FOLLOW THE TEXTBOOK: A RETROSPECTIVE STUDY FROM SRI LANKA

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Background

Childhood tuberculosis (TB) remains underdiagnosed in South-East Asia, with only 49% of estimated childhood TB cases diagnosed in 2023. Non-specific clinical features and limited microbiological confirmation contribute to diagnostic delay.

Methods

A retrospective descriptive study was conducted among 103 children diagnosed with TB at Lady Ridgeway Hospital for Children, Colombo, Sri Lanka, from August 2024 to August 2026.

Results

Median age was 7.9 years (IQR 5–10.8); male:female ratio was 1:1.86. Pulmonary TB accounted for 51.0%, extrapulmonary TB (EPTB) 40.2%, and disseminated/miliary TB 8.8%. EPTB included lymph node (15), pleural (10), CNS (4), bone/joint (3), and less common gastrointestinal, pericardial, peritoneal, renal, ocular and cutaneous sites. Growth faltering around the time of diagnosis was documented in 19.4%. Fever was not reported at presentation in 40.2% of children with available data. Mantoux positivity was 61.5% in pulmonary TB and 36.6% in EPTB. Median ESR was 98 mm/h (IQR 77.5–108; n=43). GeneXpert was positive in 76.9% of pulmonary TB and 36.6% of EPTB cases. Histopathology contributed to diagnosis in 90% of children with isolated pleural TB. All but one child, who died, recovered completely. No MDR-TB was reported.

Conclusion

Childhood TB has a broad and often non-classical presentation. Fever is not always present, and Mantoux and GeneXpert have limited sensitivity, particularly in EPTB. The lower microbiological yield, particularly in pleural disease, highlights the importance of tissue sampling alongside molecular testing. Maintaining early clinical suspicion and using complementary diagnostic approaches, including tissue histopathology for pleural disease, are essential to improve diagnosis

KIOSK C: DOLPHIN

1 November 2026, 15:15 – 15:45

#139

FROM PRESUMED TUBERCULOSIS TO GENERALIZED LYMPHATIC ANOMALY: DIAGNOSTIC JOURNEY AND SIROLIMUS THERAPY FOR REFRACTORY PEDIATRIC CHYLOTHORAX

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Background/Purpose

Refractory chylothorax in children may reflect an underlying complex lymphatic anomaly rather than a mechanical or post-surgical cause. We describe the diagnostic challenge leading to generalized lymphatic anomaly (GLA), a rare abnormal growth of lymphatic vessels, diagnosis and sirolimus therapy in a child with recurrent chylothorax.

Methods

Chronological review of medical records including imaging, pleural fluid analysis, lymph node biopsy, and lymphangiography.

Results

A severely malnourished girl presented at 2.5 years of age with recurrent right pleural effusion, sero-hemorrhagic, treated as tuberculosis (TB) despite negative mantoux and Xpert MTB/RIF at the previous hospital. At our hospital, her TB treatment was in the 4th month when pleural effusion became bilateral and chylous, with multiple lymphadenopathy; lymph node biopsy showed nonspecific dermatopathic changes. Despite management to resolve chylothorax including low-fat diet, octreotide, and antibiotics for infection, chylothorax remained unresolved. Lymphangiography revealed thoracic duct obstruction, dilated lymphatics, bilateral leakage, pulmonary bullae, and splenic lymphangiomatosis, confirming GLA. Thoracotomies with duct ligation and decortication were subsequently performed but also failed, with recurrent high-volume drainage, hypoalbuminemia, worsening malnutrition, and multidrug-resistant bacteremia. Eventually, sirolimus (0.8 mg/m²/dose twice daily) was initiated; drainage declined to nil within 2.5 weeks, without adverse effects or recurrence during this 3-month observation, with improved nutritional status.

Conclusions

Recognizing GLA is challenging, requiring a stepwise diagnostic approach, as it is often non-responsive to various treatment modalities, including surgery. Sirolimus is an effective, well-tolerated alternative once surgical options are exhausted.

Keywords

chylothorax; generalized lymphatic anomaly; sirolimus; mTOR inhibitor; pediatric

KIOSK C: DOLPHIN

1 November 2026, 15:15 – 15:45

#140

SEVERE PULMONARY HYPERTENSION WITH TRACTION BRONCHIECTASIS IN A CHILD: A DIAGNOSTIC DILEMMA IN LOW RESOURCES SETTING

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Background

Pulmonary hypertension (PH) in children is an uncommon but progressive condition associated with substantial morbidity and mortality. Accurate phenotyping is essential because prognosis and therapeutic strategies differ significantly according to the underlying mechanism. Bronchiectasis and interstitial lung disease (ILD) are recognized causes of chronic hypoxemia and pulmonary vascular remodeling that may eventually lead to PH.

Case Presentation

A 12-year-old girl was admitted with progressive exertional dyspnea and severe functional limitation. The current illness, she had no history of chronic cough, recurrent respiratory tract infection, failure to thrive, exercise intolerance, or other significant respiratory symptoms during childhood. The patient initially presented with manifestations suggestive of cardiovascular disease rather than chronic pulmonary pathology. Because the severity of pulmonary hypertension appeared disproportionate to the limited respiratory history, an extensive diagnostic workup was performed to identify the underlying etiology.

Further evaluation revealed cylindrical traction bronchiectasis with acute exacerbation and radiologic findings suggestive of underlying interstitial lung disease. Bronchoscopic examination demonstrated bronchiectatic airway changes accompanied by narrowing of the left main bronchus.

Discussion

Most children with bronchiectasis or diffuse lung disease present with chronic respiratory symptoms such as persistent productive cough, recurrent respiratory infections, exercise limitation, or impaired growth. The absence of significant respiratory symptoms throughout childhood in our patient delayed recognition of the underlying pulmonary pathology.

Conclusion

The diagnostic challenge of phenotyping severe pulmonary hypertension in a child with minimal preceding respiratory symptoms but significant structural lung abnormalities. Comprehensive evaluation is essential to distinguish idiopathic pulmonary arterial hypertension from lung disease-associated pulmonary hypertension.

KIOSK C: DOLPHIN

1 November 2026, 15:15 – 15:45

#141

CONGENITAL LEFT PULMONARY HYPOPLASIA WITH REVERSIBLE BRONCHUS INTERMEDIUS STENOSIS IN AN INFANT: CHALLENGES IN MANAGING A NON-FUNCTIONAL LUNG

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Background

Congenital pulmonary hypoplasia may cause persistent respiratory morbidity in infancy. Recurrent infection and airway narrowing may complicate surgical timing and management.

Methods

Clinical data were obtained from medical records.

Case Presentation

A 2-month-old female infant, born at 35 weeks' gestation with low Apgar scores, developed neonatal respiratory distress requiring non-invasive ventilatory support, followed by persistent respiratory symptoms. She required four admissions within 2.5 months for recurrent bronchopneumonia with sepsis, then presented with pneumonia-related respiratory failure requiring mechanical ventilation. Chest radiography showed complete left lung atelectasis, compensatory right lung hyperinflation with herniation into the left hemithorax, and right lung infiltrates. Pulmonary hypoplasia was suspected because of persistent atelectasis and recurrent infection. Her course was complicated by chronic hypercapnia, repeated extubation failure, and pneumonia. Tuberculosis, HIV, primary immunodeficiency, pulmonary hypertension, and vascular compression were excluded. Bronchoscopy revealed bronchus intermedius stenosis and left-sided mucoid hypersecretion. Chest computed tomography confirmed left lung hypoplasia with atelectasis and consolidation. As the left lung remained non-functional despite treatment, thoracotomy was performed. Failure of intraoperative expansion confirmed non-functionality, and left pneumonectomy was undertaken. Histopathology confirmed pulmonary hypoplasia. One month later, bronchoscopy showed a healed bronchial stump and resolution of bronchus intermedius stenosis. She subsequently thrived without further pulmonary infection.

Conclusion

Congenital pulmonary hypoplasia should be considered in infants with persistent unilateral atelectasis, recurrent infection, and ventilator dependence. Apparent bronchial stenosis may be reversible, reflecting inflammation or dynamic traction rather than fixed narrowing. Comprehensive airway assessment and serial bronchoscopy are essential for surgical decision-making and surveillance after pneumonectomy.

KIOSK C: DOLPHIN

1 November 2026, 15:15 – 15:45

#143

FIVE-YEAR CLINICAL SPECTRUM OF MENDELIAN SUSCEPTIBILITY TO MYCOBACTERIAL DISEASE IN FIVE SRI LANKAN CHILDREN

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Background

Mendelian susceptibility to mycobacterial disease (MSMD) comprises rare inborn errors of the IL-12/IFN- γ pathway predisposing to severe or recurrent infection with BCG, environmental mycobacteria and other intracellular pathogens. Recognition may be challenging as presentations mimic tuberculosis (TB).

Cases

We describe five Sri Lankan children with genetically confirmed MSMD, four with IL-12R β 1 deficiency and one with IFNGR1 deficiency, followed for five years. All developed BCG lymphadenitis between 3 and 6 months of age. The child with IFNGR1 deficiency developed disseminated Mycobacterium bovis infection in infancy, followed by recurrent TB and Mycobacteria Other Than Tuberculosis (MOTT) infections, and died at five years. A second child, treated twice for presumed TB lymphadenitis, developed abdominal lymphadenopathy causing obstructive jaundice; biopsy was negative for TB but positive for Salmonella. At 15 years, she remains well but has recurrent cervical lymphadenitis, with repeated biopsies showing no evidence of TB. The remaining three children with IL-12R β 1 deficiency developed culture-confirmed TB lymphadenitis; Salmonella bacteraemia and Nocardia sepsis occurred during follow-up. All three survived but continued to experience recurrent lymphadenitis.

Conclusion

This five-year follow-up demonstrates the heterogeneous and persistent clinical spectrum of MSMD. Early-onset BCG disease, recurrent or unexplained “TB” lymphadenitis, poor response to anti-TB therapy and unusual intracellular infections should prompt evaluation of the IL-12/IFN- γ pathway. Early genetic diagnosis is essential for appropriate management, prognostication and family counselling.

