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S74 IS BRONCHOSCOPY NEEDED IN CHILDREN WITH PERSISTENT BACTERIAL BRONCHITIS?

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Introduction and Objectives Persistent bacterial bronchitis (PBB) is increasingly recognised as a cause of chronic cough in young children but there is lack of consensus about investigation and treatment. At UHNS, children with a wet cough for >6 weeks unresponsive to oral antibiotics prescribed by the GP are investigated with CXR, baseline immune function and flexible bronchoscopy with bronchoalveolar lavage (FB-BAL). Patients with confirmed PBB are then treated with a prolonged course of an appropriate antibiotic. Some centres reserve FB-BAL for those who do not respond to blind treatment with co-amoxiclav or clinically relapse. The objective was to review bronchoscopic findings and immune function in children with chronic cough to determine which investigations are necessary.

Methods A retrospective case note review of all children investigated for chronic cough between May 2011 and June 2013.

Results The notes of 44 children with chronic cough were reviewed. BAL samples were taken from 6 lobes in every patient. Median (IQR) age at bronchoscopy was 3.3 (1.8–4.4) years. Positive BAL cultures were obtained from 35 patients (80%). Ten patients (23%) isolated ≥2 organisms. *Haemophilus influenza* was identified in 20 (46%), *Moraxella catarrhalis* in 11 (25%), *Staphylococcusl aureus* in 10 (23%) and *Streptococcus pneumoniae* in 6 (14%). *Candida albicans, Group A Streptococcus, Haemophilus parainfluenzae* and a *gram negative bacillus* were each identified in 1 patient (2%). In 13 (30%) at least 1 organism was isolated that was unlikely to respond to co-amoxiclav. If the right middle lobe (RML) had been the only lobe sampled (as per ERS guidance) organisms would have been missed in 14 patients (32%). Suboptimal functional antibodies to *Haemophilus influenza* or *Pneumococcus* were identified in 7 patients (16%). Appropriate antibiotics were prescribed for all patients with a positive culture. Co-amoxiclav was the most commonly prescribed antibiotic and was used in 20 patients (57%). Treatment duration varied between 4 and 8 weeks.

Conclusions FB-BAL is a useful investigation to aid the diagnosis and guide treatment in PBB. The best time to perform FB-BAL is not known. In PBB a number of organisms will be missed if BAL is only taken from the RML.

S75 THE DEVELOPMENT AND VALIDATION OF A CLINICAL SEVERITY SCORE FOR INFANTS WITH BRONCHIOLITIS

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Introduction and Objectives Bronchiolitis is a viral lower respiratory tract infection of infancy.[1] 1–3% of all infants are admitted to hospital with 3% of hospitalised infants requiring critical care.[2]

Objective To develop and validate a scoring instrument for use by health care professionals (HCPs) in infants with bronchiolitis which has clinical utility.

Methods Psychometric methods were used to develop the scoring instrument and to test the instrument for validity and reliability in a variety of clinical locations.

Results *Item generation, reduction & instrument development:* 101 items were identified from the literature and focus group workshops (families & HCPs). Consensus for importance was achieved for 45 items (Table 1) following a Delphi survey of 195 HCPs. A scoring instrument with 12 domains was developed.

Abstract S75 Table 1. Signs, symptoms & risk factors.

Respiratory Symptoms	Risk Factors & Miscellaneous symptoms	Level of Consciousness	Hydration & Perfusion
1. Respiratory rate	21. Day of illness	31. Alertness	37. Feeding
2. Grunting	22. Personal concerns / 'gut' feeling	32. Irritability	38. Urine output
3. Nasal flare	23. Parental concerns	33. Drowsiness	39. Central capillary refill time measured
4. Recession	24. General condition	34. Responds to pain	over a given time
5. Accessory muscle use	25. Chronic lung disease	35. Unresponsive	40. Peripheral perfusion
6. Dyspnoea	26. Congenital heart disease	36. AVPU scale (alert, verbal,	41. Mottled appearance
7. Tracheal tug	27. HIV/ immunodeficiency	pain, unresponsive)	42. Sunken eyes
8. Respiratory pattern	28. Gestational age (<37 weeks)		43. Sunken fonatanelle
9. $PaCO_2$ on blood gas analysis	29. Low birth weight		44. Heart rate
10. Ph on blood gas analysis	30. Bacterial or viral co-infection		45. Pallor
11. Apnoea			
12. Stridor			
13. Head bobbing			
14. Using stomach to breathe			
15. Cyanosis			
16. Effort of breathing			
17. Air entry			
18. Oxygen requirements			
19. Oxygen saturation			
20. See saw chest motion			