

All centres measured vitamin D levels and 14/15 (94%) routinely perform DXA scans. Dietary calcium intake was assessed in 11/15 centres.

Conclusion Bone health surveillance is routinely undertaken in all paediatric CF centres, with Vitamin D levels and BMD (by DXA) measurement universal. Vitamin K prescribing (criteria and dose) is still heterogeneous. A Cochrane review³ of routine vitamin K supplementation in CF concluded that evidence is currently limited to two small trials, with further evidence needed to establish optimal dose and long-term benefit.

REFERENCES

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THE EVALUATION OF EXOPHIALA IN PAEDIATRIC CYSTIC FIBROSIS

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Introduction The increasing prevalence of fungal pathogens in paediatric cystic fibrosis (CF) is challenging current practice. Whilst respiratory growth and colonisation with *Exophiala*, a saprophytic fungus is documented; the susceptibility, clinical manifestation and management is unclear.

Aim To evaluate the clinical manifestation of *Exophiala* and the role of antifungal therapies in paediatric CF.

Setting Royal Manchester Children's Hospital provides tertiary care for 182 patients and shared care for 170 patients encompassing a diverse range of genotypes.

Population Fifteen patients have yielded *Exophiala* positive sputum swabs on routine screening over 24 months.

Measures Objective measures of disease severity and demographics; age, gender, BMI (Z-score), lung function, hospital admissions are assessed against *Exophiala* growth and co-existing pathogens. Antifungal treatment regimens are described and compared.

Analysis Significant clinical manifestation of *Exophiala* and evidence of eradication in this population is described.

Results Data reveals no significant difference in sex ratio 8:7 (♂:♀) though distribution is skewed towards older patients 46.7% (n = 7) >15 years, 26.6% 12–14 years, 12.5% 10 years, 12.5% 5–7 years.

Two distinct categories of carriage are evident; sporadic growth (n = 9) and colonisation (n = 6). All positive sputa contained ≥2 organisms' suggesting coexisting colonisation. 73.3% of all patients and 100% percent of patients colonising *Exophiala* had coexisting colonisation of *Candida albicans*. 100% of patients colonising *Exophiala* also had a drop in BMI and Z-score from diagnosis to date of study. They also had a rate of >9 admissions/year. Lung function tests revealed variation independent of carriage.

Symptomatic carriage of *Exophiala* was treated with triazoles; voriconazole, itraconazole and posaconazole though 50% of

blood triazole levels were below therapeutic range. One patient cleared *Exophiala* without antifungal treatment. No further growth was noted following itraconazole treatment on initial growth in another patient. Colonisation was treated successfully with intravenous voriconazole, though re-colonised 4 months later. Colonisation was evident in 2 patients despite 6–12 months of oral voriconazole but was eradicated on switching to oral posaconazole.

Conclusion Data from this single centre study suggests that some paediatric CF patients may be more susceptible to fungal infections. *Exophiala carriage* manifestation varies and may affect height and weight. *Exophiala* eradication can be achieved.

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DOES THE DEPARTMENT OF HEALTH'S PAEDIATRIC COMMUNITY ASSESSMENT TOOL PREDICT SEVERE BRONCHIOLITIS IN INFANTS ON ADMISSION?

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Objective To evaluate the ability of the paediatric community assessment tool (CAT) to predict severe bronchiolitis in infants on admission.

Setting Alder Hey NHS Foundation Trust, Liverpool, United Kingdom. The largest and busiest children's hospital in Europe and a lead referral centre for intensive care.

Design Retrospective case note review of the endemic bronchiolitis season- October 2013 to March 2014. CAT criterion data inferred from clinical findings and patient outcomes were single handedly extracted using the first accident and emergency assessment.

Participants 106 infants ≤6 months (63 male, 43 female) from the local area (L1 - L38 postcodes) admitted with bronchiolitis.

Covariates Paediatric CAT criteria: A 'Severe respiratory distress'; B 'Increased respiratory rate'; C 'Peripheral oxygen saturation ≤ 92% (SpO₂) on breathing air and using supplemental oxygen'; D 'Respiratory exhaustion'; E 'Severe clinical dehydration or shock'; F 'Altered conscious level'; and G 'Other clinical concern'.

Outcomes Oxygen; suction; intravenous fluids; intravenous antibiotics; nasogastric feeding, stay (≥ 48 h or ≥ 5 days); mechanical ventilation; and transfer to high dependency and/or intensive care. No mortality outcomes reported.

Results and discussion Based on multivariable analyses, each paediatric criterion (A-G) was relevant predicting a given outcome. Of note, criterion D 'Respiratory exhaustion' was the only criterion to independently predict the sickest infants requiring mechanical ventilation and transfer to high dependency and/or intensive care. This is a significant finding not obtained in previous work. Criterion G 'Other clinical concern' predicted the most outcomes supporting the importance of this subjective criterion.

Conclusion This study marks the first attempt to provide health professionals with a CAT evaluation specific to bronchiolitis. A strong relationship existed between the CAT and outcomes suggesting use of the tool could potentially help identify those severely ill infants who should be prioritised for assessment and may benefit from urgent care.