Case Report

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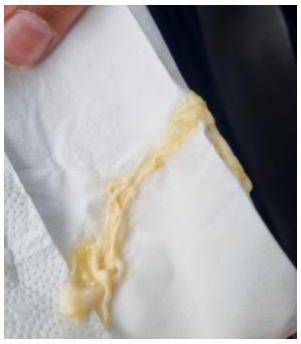
Title:
Plastic bronchitis – A rare cause for a common cough

Case:
An 11-year-old girl presented to her local hospital with a 3-month history of persistent cough. She had a background of complex congenital heart disease managed with a Fontan completion, giving her a single ventricle circulation.

She initially received 2 courses of antibiotics with a brief improvement in symptoms and then treated as a likely viral illness. The following presentation she was reviewed by her consultant who was suspicious of plastic bronchitis. She was transferred to Leeds where she was started on non-invasive treatment to break down the respiratory casts with little effect, therefore percutaneous thoracic duct embolization was attempted. The cast production stopped and our patient is currently stable with no further cough.



Background:
Plastic bronchitis (PB) is an obstructive bronchial disease. Abnormal lymphatic flow results in cast formation in the tracheobronchial tree, this can lead to airway obstruction. PB is very rare, with an estimated prevalence of 6.8 - 100 000.[i]
Casts can appear like a model of a bronchial tree. Patients present with unspecific coughing fits, desaturations and at worse critical airway obstruction. Recognition of this condition needs urgent escalation as they may need rapid referral for treatment.

Learning points:
Always consider that seemingly common presentations in children with complex conditions, cardiac and others, may have a very different significance and seek help from seniors and the appropriate teams.
Be curious and ask about the details – ideally look at the pictures (eg sputum)

References
[i] Kunder, R., Kunder, C., Sun, H. Y., Berry, G., Messner, A., Frankovich, J., Roth, S., & Mark, J. (2013). Pediatric plastic bronchitis: case report and retrospective comparative analysis of epidemiology and pathology. *Case reports in pulmonology*, *2013*, 649365. https://doi.org/10.1155/2013/649365