A child found in extremis

Answer

The barium swallow revealed a filling defect within the upper thoracic oesophagus suggestive of a foreign body. Following this finding, the patient recalled to the radiologist a choking episode while eating an orange approximately 1 week prior. A gastroscopy was performed and an orange pip was removed, with histology of the oesophageal mucosa showing changes consistent with eosinophilic oesophagitis (Fig. 2). He was later found on skin prick testing to be allergic to oranges and orange seeds and was started on omeprazole and advised to avoid citrus fruits with significant disease improvement on repeat gastroscopy.

Eosinophilic oesophagitis is an allergic inflammatory condition characterised by high numbers of eosinophils in the oesophagus (15 or more per high power field) and epithelial hyperplasia, and is being increasingly recognised in patients with a significant atopic history. It can affect children of all ages, and presenting features include vomiting, dysphagia, food impaction or failure to thrive. Diagnosis is based on endoscopic biopsy, and treatment options often include a combination of elimination of food allergens, inhaled or oral steroids and acid suppression. There is also interest in the use of immune modulators, such as anti-interleukin 5 therapy. In children with an atopic history and significant vomiting or food impaction, eosinophilic oesophagitis is an important diagnosis to consider as severe cases may lead to oesophageal strictures and stenosis.

References

1 Attwood SEA, Lamb CA. Eosinophilic oesophagitis and other non-reflux inflammatory conditions of the oesophagus: diagnostic imaging and management. Best Pract. Res. Clin. Gastroenterol. 2008; 22: 639–60.
2 Liacouras CA, Furuta GT, Hirano I et al. Eosinophilic esophagitis: updated consensus recommendations for children and adults. J. Allergy Clin. Immunol. 2011; 128: 3–20e6.

The blood-stained nappy

Answer

The haematemesis is due to swallowed maternal blood, most likely from intermittent physiological bleeding within the breast alveolar and ductal system (so-called ‘rusty pipe syndrome’). No further investigations are required.

The test performed on the nappy is a modification of the Apt test originally described for stool. The observed result is due to the relative resistance of fetal haemoglobin to alkali degradation compared with adult haemoglobin. When the Apt test principle is applied to a blood-stained nappy, the sample tested should be red (haem iron not oxidised), and control adult and baby blood spots should be used to assist interpretation.

The simple bed-side application of the Apt test principle to this common presentation can avoid hospitalisation and unnecessary tests.