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## An unusual oesophageal foreign body in neonate – case report

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### Summary

<b>Background:</b>	Foreign bodies in the esophagus in children are usually swallowed accidentally during play. An oesophageal foreign body in neonate is rare and thus the diagnostic work-up may be difficult.
<b>Case Report:</b>	We present a case of an 8-day-old baby with symptoms of oesophageal obstruction. An unusual foreign body was found.
<b>Conclusions:</b>	Foreign bodies in neonate's esophagus are rare; non-accidental action should be suspected. Atypical clinical and radiological symptoms may cause diagnostic difficulties.
<b>Key words:</b>	foreign body • oesophagus • neonate • non-accidental injury
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### Background

Foreign bodies in child's oesophagus are not rare. Most commonly, they are found in children of approx. 2 years of age, sometimes younger. X-rays absorbing foreign bodies are easy to diagnose. These are mostly coins and other small metal objects [1]. More difficult to diagnose are such bodies that do not absorb X-rays. This is when barite suspension is used to examine the oesophagus. In every case, endoscopy is performed. Foreign bodies are frequently swallowed by accident, during play. However, a foreign body in the oesophagus of a neonate raises a suspicion of a non-accidental activity.

### Case Report

An 8-day-old neonate was administered to the Clinic of General Paediatric Surgery (of the Medical University of Warsaw) with symptoms of oesophageal obstruction. The baby was transferred from a Neonate Department of some other hospital. On admission, its general health state was moderate. It was restless due to the residual mucus and saliva in the oral cavity and pharynx. The secretions were removed by suction. A gastric tube was inserted. Laboratory tests, non-enhanced chest X-rays, and ultrasonographic examinations (transfontanellar and abdominal) were performed. Their results were normal. Next, a contrast-enhanced study was carried out with a probe

introduced into the oesophagus. The oesophagus was widened, and the contrast medium omitted an abnormal mass showing smooth outlines, located mainly in the medial and inferior part of the oesophagus (Figure 1A,B).

The chest CT (Figure 2A–C) confirmed the oesophageal widening and the presence of the abnormal oesophageal mass, reaching from the level of tracheal bifurcation, to the diaphragm, and getting slightly enhanced after an i.v. contrast medium administration. Subdiaphragmatic part of the oesophagus was normal.

Radiological image suggested an oesophageal tumour mass. The differential diagnosis included a foreign body. The baby was qualified for an endoscopic examination.

After anaesthesia and during intubation, there appeared a white 'body' – foreign body – in the oesophagus. These were the cotton swabs, for ear cleaning. There were 9 of them (Figure 3). After removing them, we found pressure sores and injured mucosa of the oesophagus. No other pathological changes were found. Oral feeding was temporarily stopped and antibiotics were introduced. Consequently, the child was retransferred to the neonate department.

Further, posthospital public prosecutor's investigation led to a temporary suspension of parental rights, due to



**Figure 1A,B.** Oesophagography (AP and lateral projection) – contrast-filling defect caused by an abnormal, smooth-shaped mass inside the lumen of the esophagus.

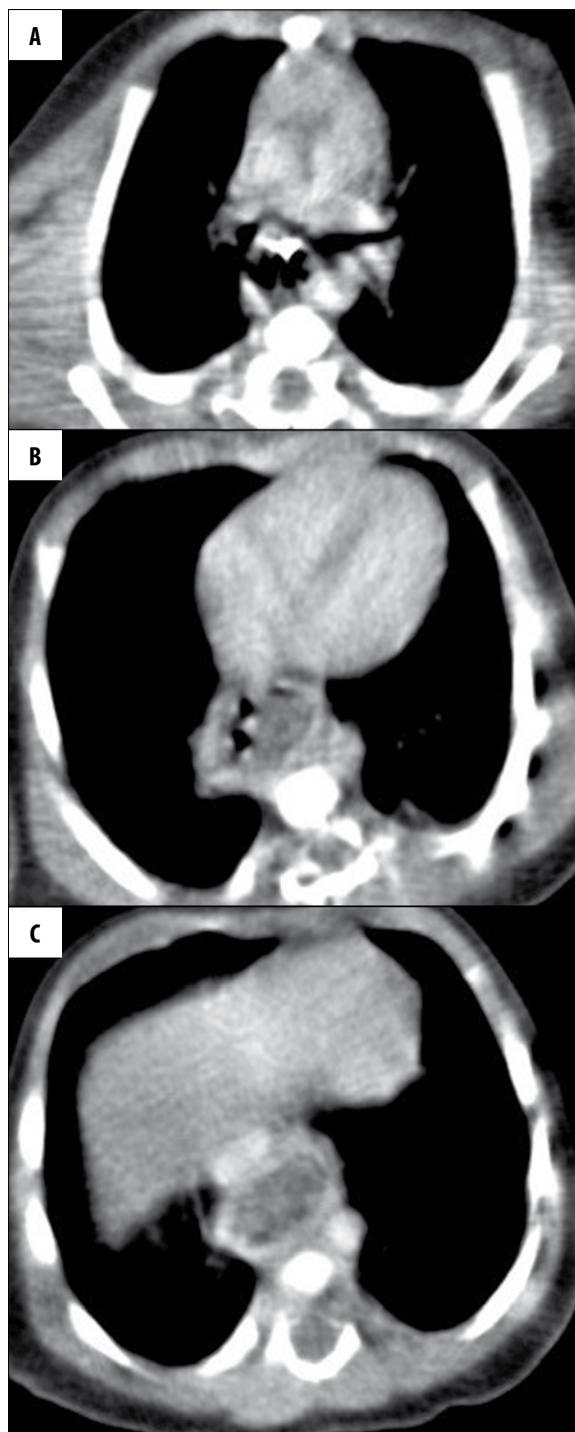
unclear circumstances of the mother's action, posing a threat to the baby's health and life.

## Discussion

The presence of a foreign body in the child's oesophagus may cause diagnostic and therapeutic difficulties. This concerns mainly such foreign bodies that do not absorb X-rays. Foreign body in the oesophagus of a neonate is considered to be an extraordinary case, which may lead to atypical clinical symptoms and difficulties with radiological differentiation (as in our patient). In the diagnostic process, we took into consideration patient's age, and thus the abnormal oesophageal mass was treated as a congenital lesion – oesophageal duplication or a tumour mass. However, the oesophageal duplication is normally a nodulous mass that displaces and compresses the oesophageal lumen, while the teratomas reported in neonates as elongated polyps, tend to originate from the nasopharynx and fill the oesophageal lumen [2,3].

Foreign body in the oesophagus of the neonate may produce respiratory symptoms, due to the compression on the tracheal wall. There was a report on a non-enhancing oesophageal nodule in a 3-week-old neonate treated initially for infection due to a prolonged cough and cyanosis episodes. Only the extended diagnostics and a contrast-enhanced examination of the oesophagus gave a correct diagnosis [4].

Similarly heavy respiratory symptoms were described in a 19-day-old neonate, with a metal key in his oesophagus [5]. The foreign body, after passing the oesophagus, abdomen



**Figure 2.** CT showing esophageal lumen widening and the presence of abnormal, tissue-density mass at the level of tracheal bifurcation (A), in the lower part of the esophagus (B), and at the level of the diaphragm (C).

and reaching the bowels, could lead to life-threatening symptoms, such as the reported intestinal obstruction in a 4-day-old neonate who swallowed a grape [6].

Clinical symptoms and abnormal radiological findings found in the above presented cases allow the clinicians to consider a foreign body as a potential diagnosis,



**Figure 3.** Foreign bodies – 9 cotton buds – removed from the oesophagus.

irrespective of the child's age. When finding a foreign body in the neonate's oesophagus, we should suspect non-accidental causes.

### Conclusions

1. An oesophageal foreign body in neonate is rare and thus raises suspicion of non-accidental actions.
2. Diagnostic work-up in case of the oesophageal foreign body in neonate may be difficult due to atypical clinical symptoms and (as in our case) atypical radiological findings.

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