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Case Report

Gastric lactobezoar - Ultrasound diagnosis: A case report

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ABSTRACT

Gastric lactobezoars are found in neonates and diagnosed with the help of imaging modalities in the background of clinically presenting features.Inspissated milk mixes with the mucous and leads to ball like semisolid mass formation. The preterm infants are usually brought with abdominal swelling with or without features of intestinal obstruction. The condition is comparatively rare in children of higher age group. We present a 3-year-old male child who had a history of abdominal pain and swelling with occasional episodes of vomiting. Ultrasonography abdomen had shown some mass in stomach which was confirmed on subsequent barium and computerized tomography studies. He was fully recovered after the endoscopic conservative management with N-acetylcystein.The present case gains little more importance because of different age and sex group.

Key words: *Barium study, Computerized tomography scan, Gastric lactobezoars, N-acetylcystein, Ultrasonography*

A bezoar is a Persian word which means antidote. These were earlier considered as antidote to poison which had some magical properties. Gastric lactobezoars (GLBs) are the result of combination of undigested milk with mucous in the stomach. There is no genetic association with the entity. This can complicate the process of digestion and can lead to obstruction or perforation. The management depends upon the underlying situation. This can either be conservative or in rare cases by gastrotomy.

CASE REPORT

A 3-year-old male child (Fig. 1) reported in the pediatric outpatient department with complaints of abdominal pain and swelling of 3 months duration. There was also history of occasional vomiting episodes. There was no history of any previous abdominal surgery. He is the first born child of the parents and birth took place in the village without any birth records. As per the parents, he was a term baby with 3.0 kg birth weight. The child was being fed on tinned dry milk and he is of the habit of taking dry milk powder off and on for the last 1 year. On examination, the child was of average height and weight. There was mild dehydration but vitals were preserved. Abdominal palpation had shown some non-tender soft mass like swelling in the left upper part of abdomen.

He was slightly anemic with hemoglobin 10.6 g%. Other biochemical parameters were within normal limits. Ultrasound study revealed an echogenic mass in the stomach with a few comet tail types of shadows within it. There was no calcification seen in the mass. The mass measured 2.4 cm × 2.2 cm. It was freely mobile within the stomach contents (Fig. 2a-c). Color Doppler did not show any vascularity and there was no extension from the surrounding structures (Fig. 3).

Videofluoroscopic barium study was performed for the diagnosis. The child was given concentrated (90% w/v) barium and anteroposterior and left lateral films of abdomen were taken.

Figure 1: Photograph of 3-year-old male child with normal physical body features

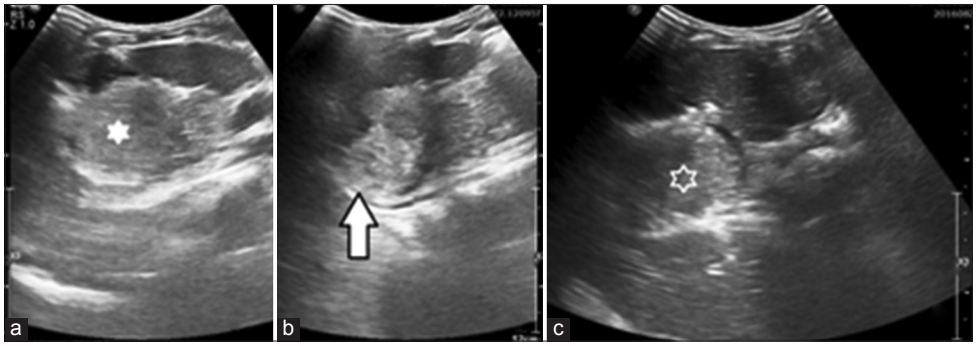

Figure 2: Ultrasound abdomen of the patient. (a) Axial section of the stomach region shows an echogenic mass ball with well defined margins with foci of air trapping (white star), (b) sagittal section shows the same mass (white arrow) without extension from any of the surrounding structures, (c) mobile echogenic ball abutting against the pylorus junction (white star)

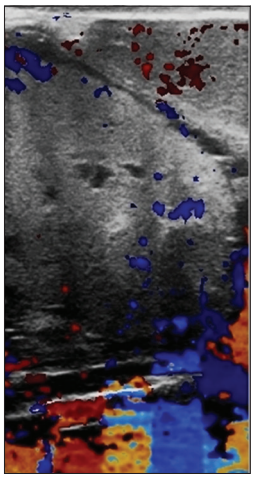

Figure 3: Color Doppler of the stomach region. There was no vascularity seen in the echogenic lesions

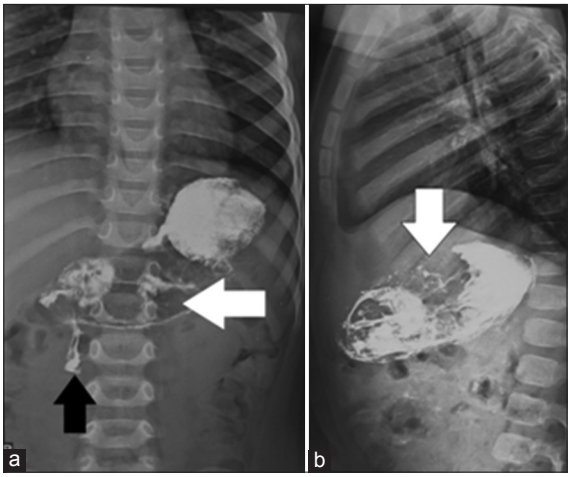

Figure 4: Barium study of stomach and duodenum. (a) Abdomen anteroposterior view showing filling defect in stomach (white arrow) and barium seen going further in duodenum without any obstruction (black arrow), (b) left lateral view of abdomen shows the persistence of filling defect (white arrow)

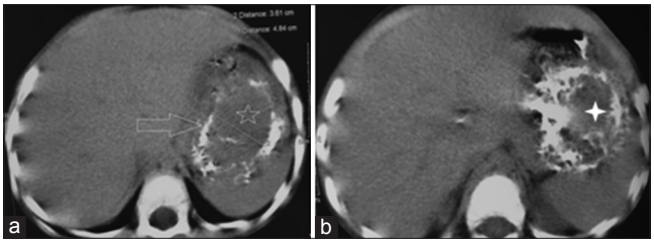

Figure 5: Computerized tomography abdomen axial sections. (a) Filling defect (white star) is seen at gastric fundus level with peripheral coating of barium (white arrow), (b) at slightly lower level the barium coating has increased with fudgy picture (white star)

The study revealed the filling defect in the stomach caused by the aforesaid mass. There were also a few coatings of barium seen over the mass (Fig. 4a-b).

A few limited axial sections of computerized tomography (CT) were taken also after proper consent of the parents (Fig. 5a and b).

The child was diagnosed as having GLBs causing a partial obstruction which was confirmed endoscopically in the sister concern hospital of the institute. Upper gastrointestinal endoscopy has shown the whitish mass in the pylorus region causing partial obstruction. The child was treated conservatively by injecting 20 cc of N-acetylcystein (NAC) (10%), a mucolytic agent mixed with 100 cc of N-saline. Then the flushing was done subsequently and there was no residue left which was also confirmed endoscopically. Follow up ultrasonography (US) on the next day showed clear stomach after distension with fluid (Fig. 6a-c).

The child had 7 days stay in the hospital and was given adequate fluids for the dehydration management. Follow-up has been advised after 3 months with dietary advice.

DISCUSSION

There are three types of bezoars have been defined *viz.,* phytobezoar, trichobezoar and lactobezoars. Although the first two are more common but lactobezoar is slightly rare in occurrence. It has been found in neonates and slightly rare in toddlers. Our case was 3-year-old male child with the presentation of GLB. Wolf et al. reported lactobezoar first in 1959. GLBs are common in neonates but are uncommon in slightly elderly kids as was present in our case. The oldest child reported with this entity is 8-year-old with cerebral palsy [1].

The factors responsible may be exogenous or endogenous. The exogenous factors in the formation of GLB are because of formulas high in casein, triglycerides and caloric density. The endogenous factors are immature gut with dehydration. The majority of GLBs are symptomatic and present with palpable

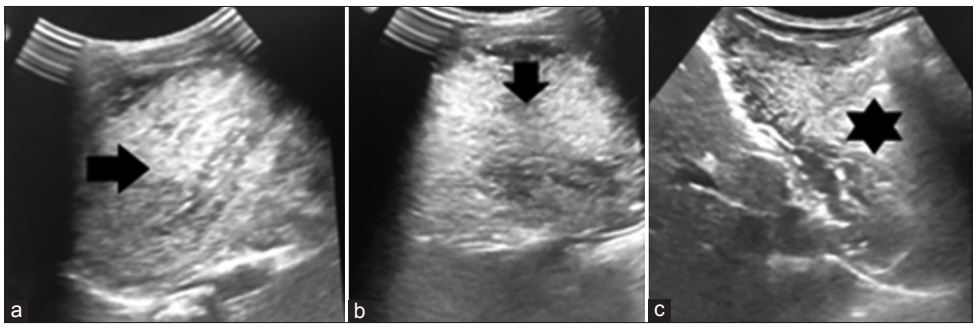

Figure 6: Follow-up abdominal ultrasonography of the same child, (a) Axial and (b) sagittal section of stomach did not reveal any residual lactobezoar (black arrows), (c) oblique section of the pylorus region show clear walls with the dissolution and disappearance lactobezoar mass (black star)

abdominal mass with distension, vomiting and poor weight gain [2]. Ultrasound examination is the gold standard modality for the diagnosis. There is echogenic free floating ball in the stomach with air trapping within it [3]. Barium studies and in very rare cases CT can further confirm the underlying findings [4]. The mainstay of the management stays with endoscopic disintegration by NAC as was done in our case [5,6]. There is no fear of reformation as the dietary advice is always given to the parents of the child.

CONCLUSION

Lactobezoars are very rare in toddlers as these are mostly found in preterm infants who are fed with formula feeds. The infant shows the signs of the abdominal distension and pain with or without vomiting. The diagnosis can be made with simple US. The majority of children are treated conservatively with NAC. Recurrence is not that common.

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