Volvulus of the Small Intestine Associated to Left Paraduodenal Hernia: A Case Report

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Volvulus du Grêle associé à une hernie paraduodénale gauche : A propos d'un cas

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RÉSUMÉ

But : Rapporter une étiologie rare de volvulus chez l'enfant représentée par une hernie paraduodénale gauche avec malrotation intestinale.

Observation : Un nourrisson de 2 mois s'est présenté dans un tableau d'occlusion intestinale haute. L'échographie a montré des signes en faveur d'un volvulus du grêle et l'exploration chirurgicale a trouvé une hernie paraduodénale gauche contenant le coecum, l'iléon et le colon associée à un volvulus du grêle en dehors de la hernie.

Conclusion : La hernie paraduodénale est une cause rare d'occlusion intestinale pouvant être suspectée par les données cliniques et radiologiques. Le traitement est toujours chirurgical afin de prévenir la nécrose intestinale et fermer le défect herniaire.

Mots-clés

Volvulus, hernie interne, Paraduodenale.

SUMMARY

Aim: To report a rare case of a left paraduodenal hernia presenting as volvulus of the small intestine associated to an intestinal malrotation.

Case report: A 2 months-old girl presented with history of bilious vomiting, sonography showed signs of volvulus and emergency laparotomy was performed and confirmed left paraduodenal hernia containing a part of the ileon, coecum with right colon and volvulus of the small intestine out of the hernia sac.

Conclusion: Paraduodenal hernia is an uncommon cause of small bowel volvulus. It can be suspected by clinical and radiological findings, surgery is always required to prevent small bowel necrosis and to repair the defect.

Key-words

Volvulus, internal hernia; paraduodenal

Paraduodenal hernia (PDH) is the most common type of internal abdominal hernias, accounting for over one half of reported cases. It is also called congenital mesentericoparietal hernia depending on anatomic features and embryologic origin. Clinical symptoms range from totally asymptomatic to chronic or acute bowel obstruction (1, 2). We report a case of intestinal obstruction caused by volvulus of nonherniated small intestine associated to intestinal malrotation.

CASE REPORT

This is a 2 month-old girl presented at the Emergency Department of Paediatric surgery of Children Hospital of Tunis, with a history of vomiting treated as a gastrooesophageal reflux. Vomiting becomes bilious since 12 hours associated with abdominal distension. On physical examination, she was non febrile and her abdomen was distended. Plain abdominal radiography showed distended loops of small intestine. Sonography showed a "whirepool" disposition of the intestine concluding to the diagnosis of volvulus (Fig 1).

Emergency laparotomy confirmed herniation of the right colon, coecum and 30 cm of the ileon in a left paraduodenal hernia (Fig 2) and a 360° clockwise volvulus of non gangrenous small bowel out of the hernia sac. After reduction of the volvulated small bowel, reduction of herniated bowel, resection of the hernia sac and division of the lateral attachments of the right colon, transfer of the colon to the left side of the abdomen was performed. Postoperative course was uneventful.

Figure 1 : Sonography showing "whirepool" disposition of the intestine

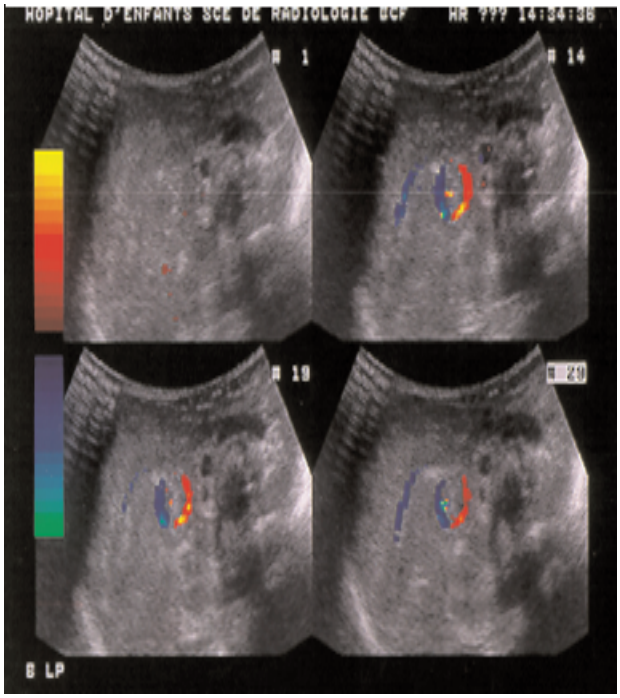
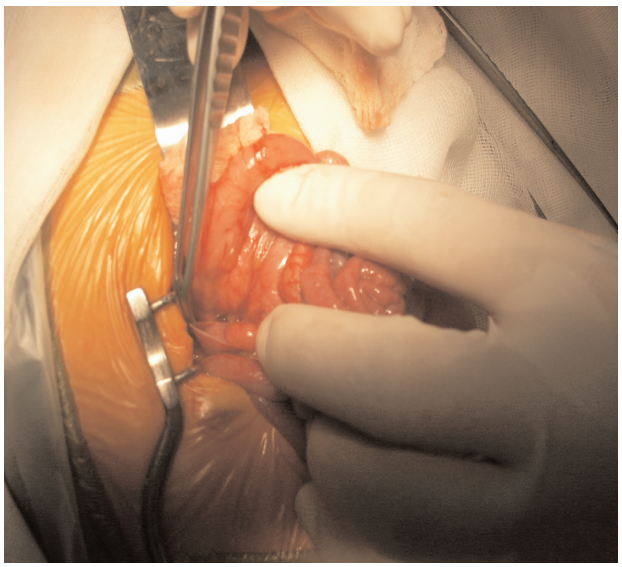


Figure 2 : Sonography showing "whirepool" disposition of the intestine



DISCUSSION

Paraduodenal hernias are the most common form of internal hernias and are responsible for approximately 1% of small bowel obstructions. They are caused by herniation of the intestine by the duodenojejunal fossae. They are attributed to a congenital incomplete rotation of the mid gut and to variations of peritoneal fixation. Peritoneal defect is located to the left or the right of the fourth portion of the duodenum and is related to failure of fusion of the inferior mesentery to the parietal peritoneum (2-5).

PDH usually occurs in adulthood and the most common presenting signs result from partial or complete small bowel obstruction. PDH often reports history of recurrent abdominal pain that has been present from months to years (2, 5, 6, 7, 8).

Diagnosis can be made preoperatively by small bowel contrast studies and abdominal tomography demonstrate characteristics of internal hernia showing small bowel encased in a sac lying between the pancreas and the stomach (9,10). In general, diagnosis is made at surgical exploration like in the current case.

Treatment of PDH is surgical, requiring reduction of the hernia and closure of the defect avoiding injuries to the vessels at the neck of the sac (2,3,9). Intestinal malrotation must be treated in the same time.

CONCLUSION

PDH is an uncommon cause of small bowel volvulus. It can be suspected by clinical and radiological findings, surgery is always required to prevent small bowel necrosis and to repair the defect.

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