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Percutaneous peritoneal drainage in isolated neonatal gastric perforation

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Abstract

A comment on the article by He *et al*, "Idiopathic neonatal pneumoperitoneum with favorable outcome: A case report and review", published on *World Journal of Gastroenterology* that reported a case of idiopathic neonatal pneumoperitoneum, possibly due to gastric perforation, with a favorable outcome without surgical intervention.

Key words: Pneumoperitoneum; Gastric perforation; Intestinal perforation; Conservative management; Percutaneous peritoneal drainage; Antibiotic; Newborn infant

Core tip: Neonatal gastric perforation is a rare, life-threatening problem. Although surgical repair is the principal mode of managing this life-threatening disease, conservative intervention, such as percutaneous peritoneal drainage, is an alternative approach, especially under specific conditions.

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TO THE EDITOR

We read with great interest the article by He *et al*[1], which reported a case of idiopathic neonatal pneumoperitoneum, possibly due to gastric perforation, with a favorable outcome without surgical intervention. Although the principal mode of managing this serious condition is primary surgical repair, the authors concluded that conservative management is feasible for idiopathic neonatal pneumoperitoneum and that a favorable outcome could be achieved without

an exploratory laparotomy if the condition were diagnosed promptly. We recently reported a similar case of neonatal pneumoperitoneum, possibly due to isolated gastric perforation, in an extremely low birth weight infant whose clinical condition contraindicated general anesthesia and an exploratory laparotomy, and who recovered with percutaneous peritoneal drainage, along with placement of a Penrose drain and the use of wide-spectrum antibiotics[2]. Therefore, we think that a conservative approach is an alternative treatment for neonatal pneumoperitoneum, even with gastric perforation, especially when general anesthesia and surgical repair are impossible, such as in very sick, extremely low birth weight infants.

Gastric perforation in the newborn is a rare, life-threatening problem that is seen mainly in premature infants. Its reported incidence is 1 in 5000 live births, and it constitutes 7% of all gastrointestinal perforations[2-4]. The mortality rate is still high despite early diagnosis and treatment due to accompanying problems. Postoperative complications may also cause morbidity and mortality. Although surgical repair is the principal mode of managing this life-threatening disease, percutaneous peritoneal drainage is an alternative under some conditions. Supporting our report, Hesketh *et al*[5] reported seven patients with neonatal esophageal perforation who were managed non-operatively. Five patients in their series required additional interventions, such as tube thoracostomies for pneumothoraces. Four of their patients survived, and three died. Therefore, they suggest that non-operative management of esophageal perforation in newborns may be a safe initial strategy, but more aggressive interventions may ultimately be required.

In conclusion, we believe that although the principal mode of managing neonatal gastric perforation is operative, conservative intervention such as percutaneous peritoneal drainage is an alternative approach, especially under specific conditions in order to avoid intra- and postoperative complications in this vulnerable population.

REFERENCES

1 **He TZ**, Xu C, Ji Y, Sun XY, Liu M. Idiopathic neonatal pneumoperitoneum with favorable outcome: A case report and review. *World J Gastroenterol* 2015; **21**: 6417-6421 [PMID: 26034380 DOI: 10.3748/wjg.v21.i20.6417]

2 **Aydin M**, Zenciroğlu A, Hakan N, Erdoğan D, Okumuş N, Ipek MS. Gastric perforation in an extremely low birth weight infant recovered with percutaneous peritoneal drainage. *Turk J Pediatr* 2011; **53**: 467-470 [PMID: 21980855]

3 **Jawad AJ**, Al-Rabie A, Hadi A, Al-Sowailem A, Al-Rawaf A, Abu-Touk B, Al-Karfi T, Al-Sammarai A. Spontaneous neonatal gastric perforation. *Pediatr Surg Int* 2002; **18**: 396-399 [PMID: 12415364]

4 **Attridge JT**, Clark R, Walker MW, Gordon PV. New insights into spontaneous intestinal perforation using a national data set: (2) two populations of patients with perforations. *J Perinatol* 2006; **26**: 185-188 [PMID: 16493433]

5 **Hesketh AJ**, Behr CA, Soffer SZ, Hong AR, Glick RD. Neonatal esophageal perforation: nonoperative management. *J Surg Res* 2015; **198**: 1-6 [PMID: 26055213 DOI: 10.1016/j.jss.2015.05.018]

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