

Graham Patch ile Yenidoğan Gastrik Perforasyonunun Başarılı Yönetimi: Yenidoğan Olguda Eski Bir Teknik

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Öz

Neonatal gastrik perforasyon acil cerrahi gerektiren oldukça nadir bir durumdur. Kötü prognoza ve yüksek mortaliteye sahiptir. Omental yama, erişkinlerde gastrik ve duodenal perforasyonlar için sıklıkla kullanılmaktadır. Graham Patch, yenidoğanın iatrojenik mide perforasyonlarında kullanılabilecek basit ve etkili bir yöntemdir. Bu olgu ile yenidoğan hastada iatrojenik gastrik perforasyonun tedavisi tanımlandı.

Anahtar Kelimeler: Omentoplasti, yenidoğan, mide perforasyonu

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Successful Management of Neonatal Gastric Perforation With Graham Patch: An Old Technique in A Newborn Subject

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Abstract

Neonatal gastric perforation is an extremely rare condition requiring urgent surgery. It has poor prognosis and high mortality. Omental patches were usually used for gastric and duodenal perforations in adults. Graham patch is a simple and effective method that can be used in newborn with iatrogenic stomach perforations. We described the management of a case of neonatal iatrogenic gastric perforation.

Keywords: Omentoplasty, newborn, gastric perforation

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INTRODUCTION

Neonatal gastric perforation (NGP) is an extremely rare condition requiring urgent surgery¹ NGP is about 7% of newborn gastrointestinal perforations.² It has poor prognosis and high mortality.^{1,2} Surgical treatment in perforations is based on debridement of necrotic edges and subsequently primary closure of layers.^{1,3} Omental patches were first described by

Cellen-Jones in 1929 and then by Graham in 1937.⁴

In this case, We described the management of a case of neonatal iatrogenic gastric perforation with Graham Patch. According to our knowledge, this is the first newborn treated with graham patch.

CASE

A 32-week, 1850-gram male patient was admitted to the intensive care unit for respiratory distress. Abdominal distension developed after the nasogastric tube placement for nutrition on the 3rd day of life. Pneumoperitoneum was detected on the radiograph. Because the case was unstable for surgery, peritoneal drainage was performed as initial treatment. On exploration, perforation was detected in the gastric antrum during surgical exploration ([Figure 1](#)). Due to intense inflammation, it was repaired with Graham patch ([Figure 2](#)). Oral feeds were started on the fifth postoperative day. At 6 month follow up baby is progressing well.

DISCUSSION

Newborn Gastric perforation was first described by Siebold in 1825.¹ The incidence is 1 in 5000 live births.⁵ Three mechanisms have been proposed to be traumatic, ischemic and spontaneous. Nasogastric tube placement is the most common cause of iatrogenic gastric perforation in neonates.¹ Spontaneous gastric perforation often occurs within the first week of life¹. Congenital muscle defects in the stomach wall are responsible for the etiology of spontaneous perforations.⁶

Radiologically massive pneumoperitoneum is detected in gastric perforation.

Progressive pneumoperitoneum associated with large-sized defects in this proximal gastrointestinal system causes cardiopulmonary failure.¹ Hypovolemic shock, sepsis have been shown to have poor prognosis abdominal distension that cause respiratory distress make the newborn unstable for surgery.⁷ Male gender, metabolic acidosis, prematurity, low birth weight have been shown to have poor prognosis.² Mortality is reported between 27% and 83%.⁵

Peritoneal drainage may be performed for a short period as initial therapy before surgical repair in newborns who are thought to be unable to tolerate surgery. When the patient is stabilized, formal surgery can be performed.^{1,5} Percutaneous drainage may reduce pulmonary and cardiac distress associated with peumoperitoneum before surgery.

Surgical treatment is debritement of edges with primary closure of perforation.^{1,3,6} However, diffuse necrosis and inflammation can sometimes requires partial or total gastrectomy.³

The omental patch (Graham patch) is an operative approach to the treatment of ulcer perforations and is described 70 years ago by Graham. A good vascularized omental pedicle is brought to the perforation area and the perforation area is closed with the omentum.⁸ Yıldız reported that the Graham

patch method used in children with peptic ulcer perforation was simple and reliable.⁴

As described in our case peritoneal drainage can be as an initial treatment method in unstable neonates for surgery. Graham patch is a simple and effective method that should be used in newborn iatrogenic stomach perforations.

REFERENCES

- 1- Kshirsagar AY, Vasisth GO, Ahire MD, Kanojiya RK, Sulhyan SR. Acute Spontaneous Gastric Perforation İn Neonates: A Report Of Three Cases. African Journal Of Paediatric Surgery. 2011;8(1):79-81.
- 2- Byun J, Kim HY, Noh SY, Kim SH, Jung SE, Lee SC, Park KW. Neonatal Gastric Perforation: A Single Center Experience. World Journal Of Gastrointestinal Surgery. 2014;6(8):151155.
- 3- Ghribi A, Krichene I, Fekih AH, Mekki M, Belghith M, Nouri A. Gastric Perforation İn The Newborn. La Tunisie Medicale. 2013;91(7):464-467.
- 4- Yildiz T, Ilce HT, Ceran C, Ilce Z. Simple Patch Closure For Perforated Peptic Ulcer İn Children Followed By Helicobacter Pylori Eradication. Pakistan Journal Of Medical Science. 2014;30(3):493-496.
- 5- Aydin M, Zenciroglu A, Hakan N, Erdogan D, Okumus N, Ipek MS. Gastric Perforation İn An Extremely Low Birth Weight Infant Recovered With Percutaneous Peritoneal Drainage. Turk J Pediatr. 2011;53(4):467-470.
- 6- Acer T, Karnak İ, Yalçın Ş, Şenocak ME. Why Gastric Perforation Occurs İn Patients With İsolated Esophageal Atresia: More Vulnerable Stomach? Turkish Journal Of Pediatrics. 2012;54(3):312-316.
- 7- Khan YA, Akhtar J. Pneumoscrotum: A Rare Presentation Of Gastric Perforation İn A Neonate. APSP Journal Of Case Reports. 2010;1(2):15.
- 8- Bingener J, Loomis EA, Gostout CJ, Zielinski MD, Buttar NS, Song LMWK, Rajan E. Feasibility Of NOTES Omental Plug Repair Of Perforated Peptic Ulcers: Results From A Clinical Pilot Trial. Surgical Endoscopy. 2013;27(6):2201-2208.

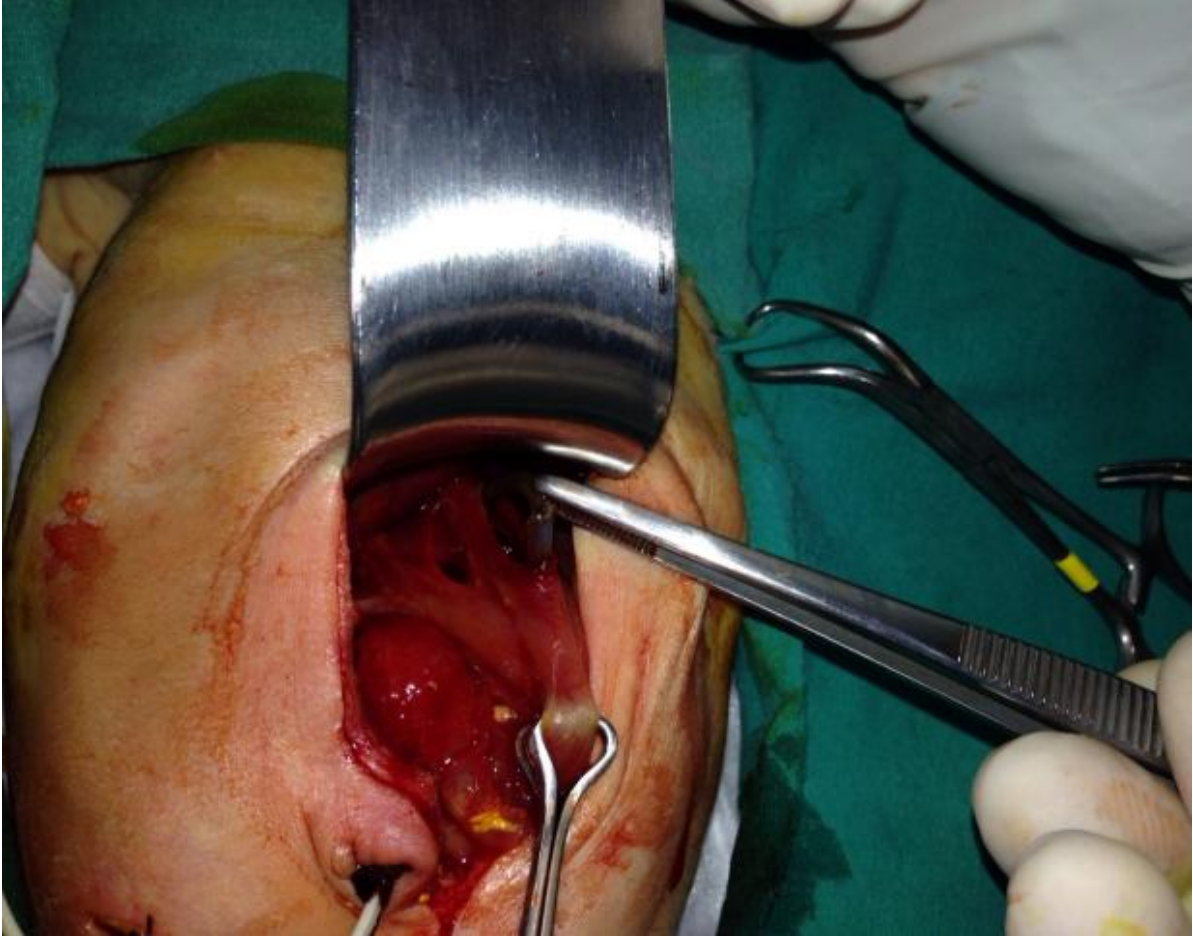


Figure 1. Gastric Perforation in the Antrum (Nasogastric Tube Seen).

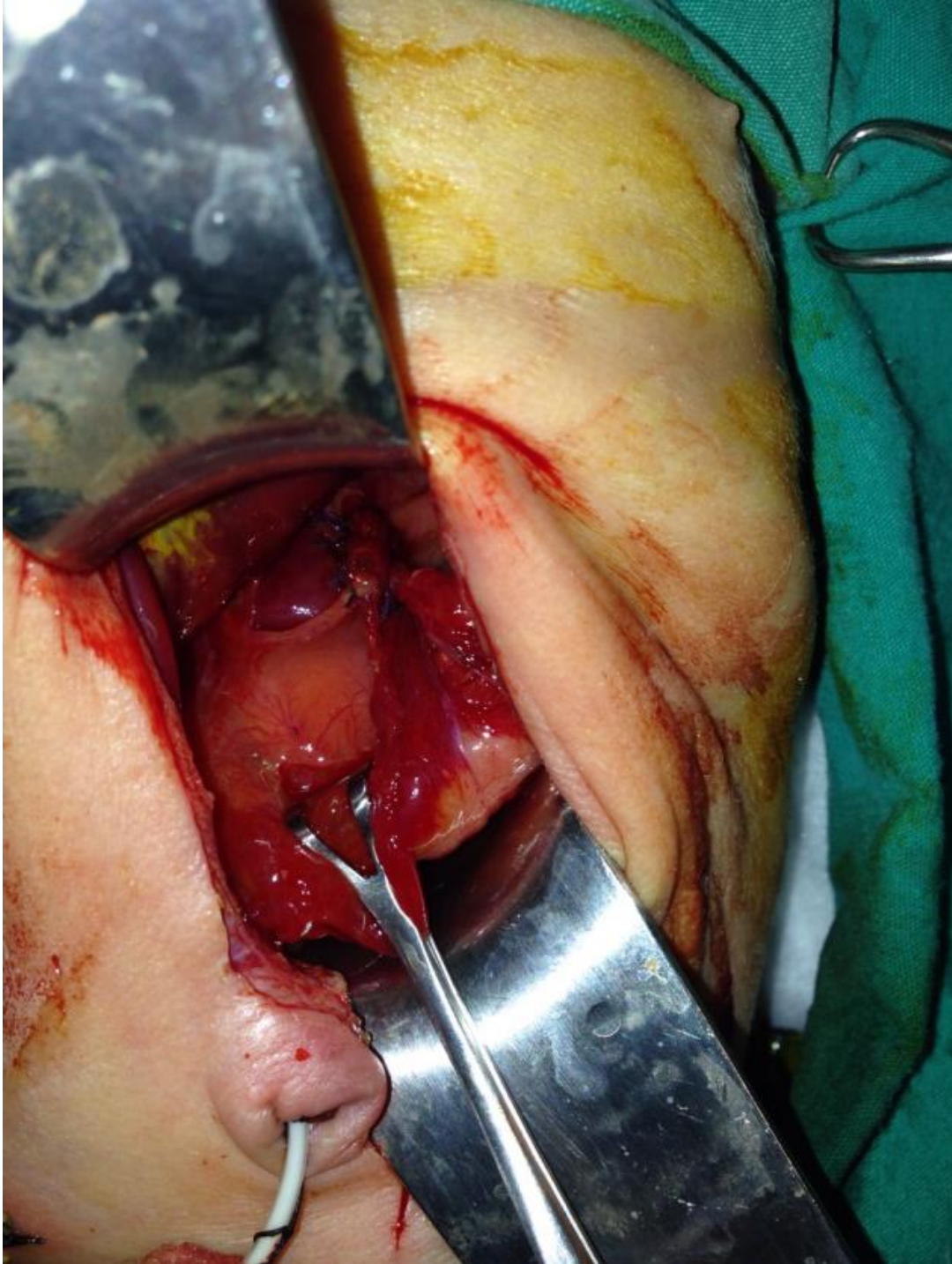


Figure 2. Post-repair appearance with Graham patch.