

Giant gastric dilatation and necrotic ulceration due to diabetic gastroparesis: A case report

Diyabetik gastropareziye baęlı dev mide dilatasyonu ve nekrotik ülserler: Olgusu sunumu

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Özet

Gastroparezi, gecikmiş mide boşalmasına yol açan gastrik motilitenin bir bozukluęudur. Nekrotik gastrik ülserlerle beraber dev mide dilatasyonu oluşmuş diyabetik gastroparezi olgusunu sunuyoruz. Yetmiş yaşında tip 2 diyabet hastası kadın, 10 günden beri devam eden kusma ve karın ağrısı şikâyetiyle kliniğimize başvurdu. Hastanın diyabetinin 9 yıldır kontrol altına alınmadığı öğrenildi. Fizik muayenede karın distansiyonu ve klopotaş saptandı. Gastroskopide, mide dilatasyonu ile bazı küçük mide ülserleri vardı. Bilgisayarlı tomografide bütün karın boşluęunu dolduran dev mide dilatasyonu görüldü. Mide içeriğinin katı olması nedeniyle nazogastrik dekompresyon başarılı olmadı ve cerrahi planlandı. Laparatomide dev mide dilatasyonu saptandı. Mide korpusunun arka tarafında üç adet nekrotik ülser vardı. Total gastrektomi yapıldı. Ameliyat sonrası dönemde iyileşme sorunsuz oldu.

Sonuç olarak, hekimler özellikle sürekli kusma şikâyeti olan yetersiz saęlık bakımı almış diyabetik hastalarda gastroparezi gibi diyabetik otonomik nöropati yönünden dikkatli olmalıdırlar. Medikal tedaviye dirençli olgularda cerrahi girişim gerekebilir.

Anahtar sözcükler: diyabetik nöropati, gastroparezi, cerrahi tedavi

Abstract

Gastroparesis is a disorder of gastric motility which causes delayed gastric emptying. We report a case of diabetic gastroparesis with abnormal gastric dilatation and necrotic gastric ulcers. A 70 years-old, diabetic female patient complaining of persistent vomiting and abdominal pain in the past 10 days, was admitted to our clinic. She had a history of uncontrolled diabetes for 9 years. Physical examination revealed abdominal distention and clapotage. Gastroscoy showed gastric dilatation with some small ulcers. Computed tomography revealed a giant dilated stomach filling the entire abdominal cavity. Nasogastric decompression could not be achieved due presence of solid components in the stomach content. Laparotomy revealed a giant dilated stomach. There were three ulcerated necrotic lesiona in the posterior wall of the corpus. Total gastrectomy was performed. Postoperative recovery was uneventful.

In conclusion, this demonstrative case indicates that physicians should be alert for conditions due to diabetic autonomic neuropathy such as gastroparesis, particularly in diabetic patients with poor health care complaining persistent vomiting. Surgery may be required for intractable cases.

Keywords: diabetic neuropathy, gastroparesis, surgical treatment

Introduction

Gastroparesis is a disorder of gastric motility which causes delayed gastric emptying. The most common causes of gastroparesis are autonomic neuropathy due to

long standing diabetes mellitus, to postoperative ileus and to drug effects. Symptoms associated with gastroparesis are nausea, vomiting, abdominal bloating, and postprandial fullness.^{1,2} Gastroparesis may be acute or chronic. Symptoms persisting for more than 3 months should be classified as chronic gastroparesis. When the treatment is inadequate, gastroparesis may rarely lead to gastric dilatation. There are only a few reports on patients who developed extreme gastric dilatation and were treated surgically and, to our knowledge, gastric ulcer or perforation has not been reported in patients with gastroparesis.^{1,2} Here we report a case of diabetic gastroparesis with abnormal gastric dilatation and gastric ulcers.

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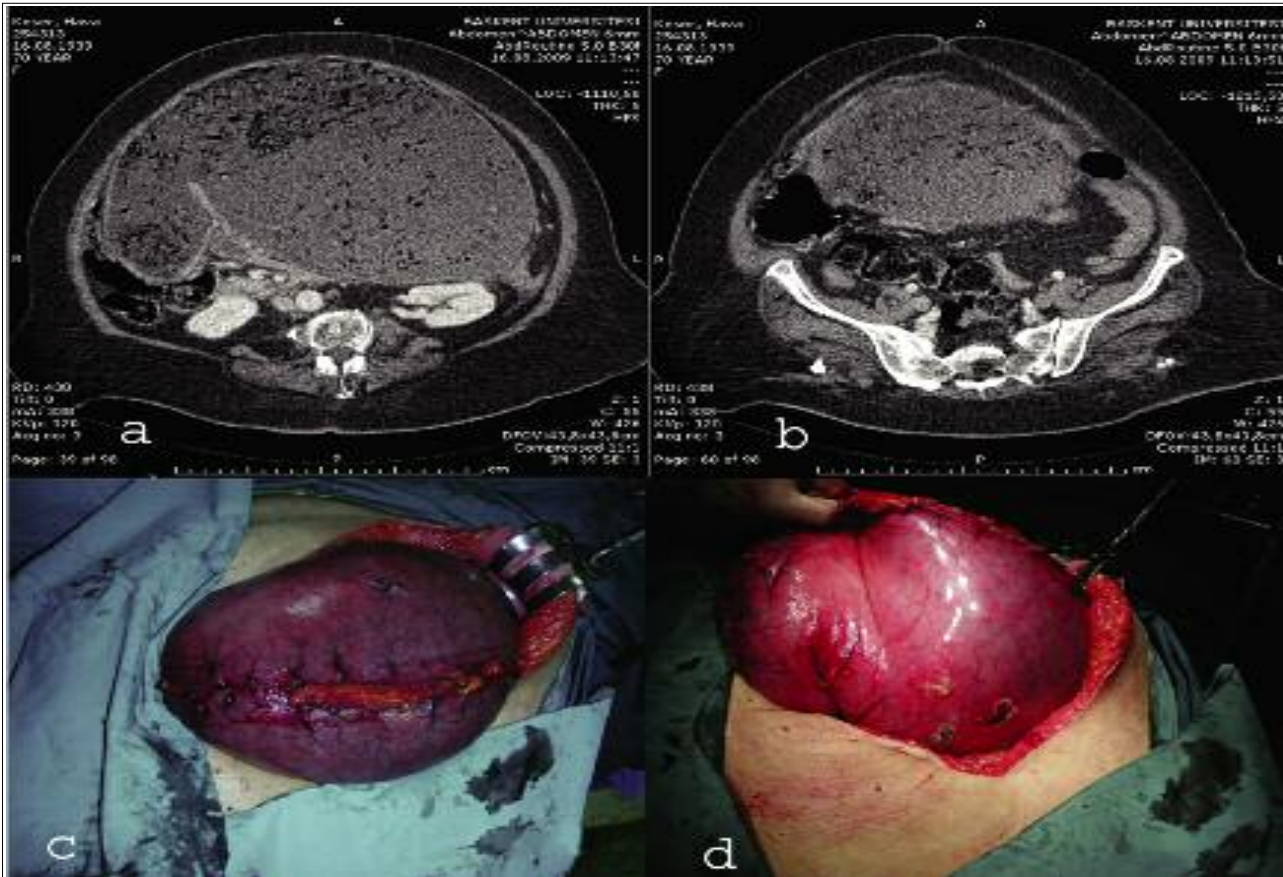


Figure 1. a) Computed tomography of the dilated stomach showing solid and liquid retention and filling the whole abdominal cavity. b) Extension of the giant stomach to the pelvis. c) Mobilization of the greater curvature and antrum achieved only after division of the gastro-colic ligament. d) Ulcerated necrotic lesions in the posterior wall of the corpus due to extreme distension.

Case Report

A 70 years-old female patient was referred to our hospital because of vomiting in the past 10 days. Her medical history revealed diabetes mellitus detected 9 years previously. The patient had not attended regularly her follow-up medical visits for the control of her diabetes, but did not report any symptoms of diabetic autonomic neuropathy. Ten days ago she had been admitted to a first level health facility for vomiting and oral pro-kinetics had been prescribed. She was seen in different clinics two more times and given some medications. She has been referred to our hospital for continuing vomiting and abdominal pain. On physical examination abdominal distention and clapotage (splashing sound) were found as notable findings. Upper endoscopy revealed gastric dilatation with presence of ingested food remnants and some small ulcers in the corpus. There was no pyloric deformity. Computed abdominal tomography revealed a giant dilated stomach full of solid and liquid retention. The stomach filled the whole abdomi-

nal cavity and extended as far as the pelvis (Figure 1a-1b). Nasogastric decompression could not be achieved due to presence of solid components. A surgical intervention was planned.

Laparotomy revealed a giant dilated stomach which was not easy to mobilize for any intervention. A small gastrotomy from the anterior wall of the stomach was performed. However, application of a 10 mm suction apparatus was not successful in decompressing the solid part of the gastric contents. The greater curvature and antrum could be mobilized from the abdominal cavity only after division of the gastro-colic ligament, (Figure 1c). In the posterior wall of the corpus, there were three ulcerated necrotic lesions which had developed due to extreme distension (Figure 1d). After the antrum was mobilized out of the abdomen, a larger gastrotomy (6 cm long) was performed and the gastric contents were removed. This maneuver facilitated the operation and a total gastrectomy and Roux-en-Y esophagojejunostomy were performed. Postoperatively the patient did well and recovered uneventfully. Pathologic examination

revealed multifocal ulcerative erosive gastritis, focal micro abscesses, and hemorrhagic lesions with submucosal congestion.

Discussion

Diabetic autonomic neuropathy is among the least recognized complications of diabetes and may present with arrhythmia, impotence, urinary incontinence, diarrhea or gastroparesis.³ Physicians should be alert for a diagnosis of gastroparesis in diabetic patients who are not under adequate control and who present with vomiting. The first step for the treatment of this condition is to control the blood glucose level. Dietary regulations and medications (pro-kinetics and/or anti-emetics) may also prove to be useful. For long term gastroparesis with gastric dilatation, naso-gastric decompression and parenteral nutrition are advocated.³ Jejunostomy and tube feeding is another option for nutrition. This latter method, although more invasive, leads to fewer infectious complications and reduces hospital stay. Endoscopic injection of botulinum into the pyloric area is thought to decrease pyloric spasm and accelerate gastric emptying.⁴ Gastric electric stimulation is an emerging treatment for refractory gastroparesis. This technique has been reported to accelerate gastric emptying.⁵

Gastric dilatation may be extreme in some patients, as was the case in our patient who was a poor attender to health care. Surgery is the last option for these patients.⁶ Treatment options for extreme gastric dilatation are tube gastrostomy, pyloroplasty or gastric resection.² Gastric necrosis secondary to the extreme gastric dilata-

tion has not been reported before. This is the first well documented report of a case of giant gastric dilatation and gastric ulceration due to diabetic gastroparesis.

We also would like to underline the technical difficulties for such a giant stomach. It was very difficult to manipulate the dilated stomach. Preoperative nasogastric decompression or intra-operative gastrotomy and suction were not successful in reducing the size of the stomach. Gastric content was mostly solid and decompression was achieved by wide gastrotomy.

In conclusion, particularly in those diabetic patients with poor health care who present with persistent vomiting, physicians should be alert for a diagnosis of gastroparesis due to diabetic autonomic neuropathy. Surgery may be required for intractable cases and extreme gastric dilatation. Risks for gastric necrotic ulceration and possible consecutive perforation should be kept in mind.

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