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Abdominal Pain and Fever Following Gastric Mini-bypass Surgery

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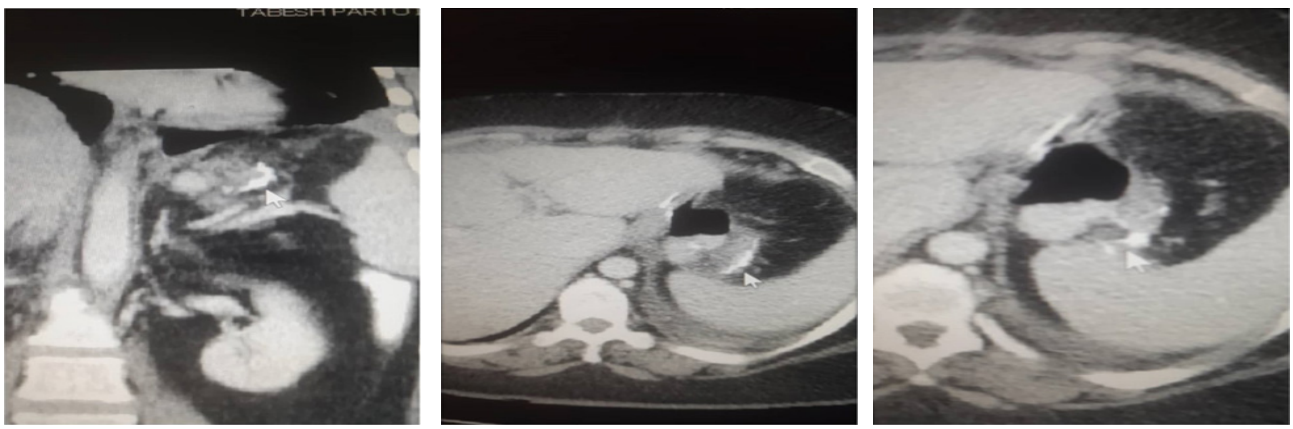

Fig.1: **Fistula in the site of anastomosis**

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A 42 year old woman with history of HTN,HLP ,sever fatty liver and weighting 138 kg (BMI: 54 kg/m^2) that had suffered of abdominal pain in epigastric area and sever fever some days after gastrectomy mini bypass surgery, presented to the emergency department. There are no evidence about GI hemorrhaging and alteration of intestinal motions. Her vital signs are as a below:

Blood pressure: 110.75 mm Hg
Pulse rate: 110 Per/Min
Respiratory rate: 22 Per/Min
Body temperature: 38.5^{0}C

In abdominal examination, there are no expansion, pus or blood discharging from surgery area. In

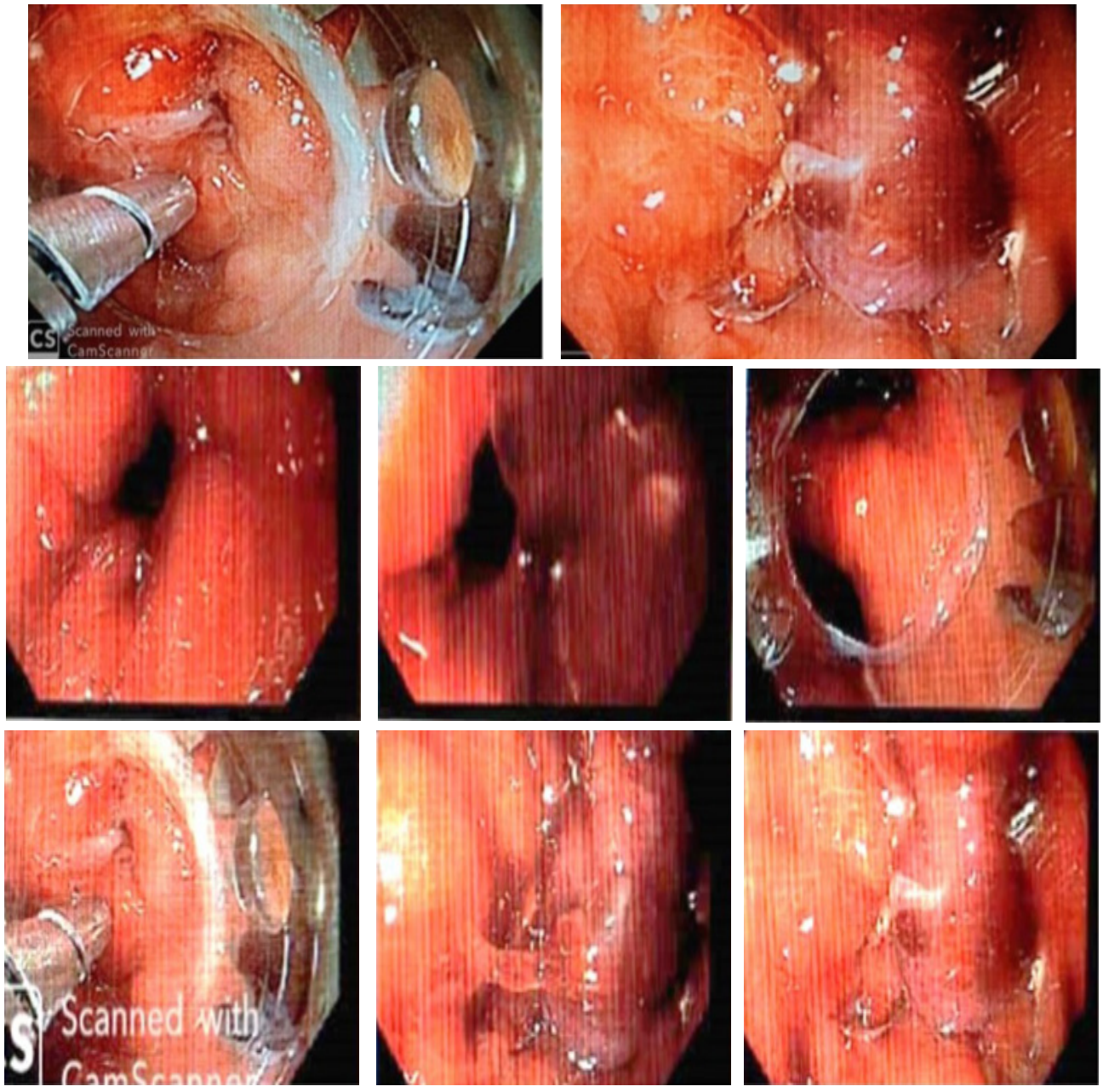

Fig.2: **Repair of leakage site with Ovesco clip**

palpation abdomen was fatty and there is a slight tenderness in epigastric area. Laboratory experiment showed systemic inflammation with leukocytosis and serum CRP rising.

What is your diagnosis?

Answer:
leakage from the site of anastomosis.

According to clinical and laboratory findings, for evaluation of surgical complications such as leakage and fistula pelvic and abdominal CT scan with gastrographin were requested. Evidence showed

leakage and fistula with 50 mm length and 8 mm diameter in posterolateral site of stomach. (Figure 1)

The patient has received broad spectrum injectable antibiotics treatment and oral feeding was discontinued. Depending on the patient's clinical condition, we decided to treat leakage and fistula with endoscopic clips or stents. Prior to initiation of treatment, informed consent form was obtained. In upper endoscopy, fistula and leakage were observed at the esophageal gastric junction. The cause of fistula was a stenosis at the site of anastomosis, which put pressure on the upper part of the anastomosis.

The purulent secretions of the fistula site were completely suctioned, and due to presence of only one fistula, using of the clip was preferred to the stent, and finally the fistula was restored with using of the Ovesco Clip. A few days later, the oral feeding began for patient and discharged in good general condition after completing the course of injectable antibiotics. (Figure 2)

DISCUSSION

In recent years, the use of surgical interventions to treat obesity, especially gastric mini-bypass surgery, has expanded. In a study in 2018, Michott and colleagues examined the complications of mini-bypass surgery. According to this study, the incidence of anastomotic fistuls was 0.5 to 2.3%, anastomotic ulcers 0.6 to 8%, iron deficiency anemia 1.2 to 4.9% and biliary reflux 0.7% to 2% (1,2).

Leakage from the anastomotic site, although is a rare complication, but it is dangerous and life-threatening. As the contents of the gastrointestinal tract enter the abdominal cavity, the patient may become severe infections and septic shock and leading to death if it is not diagnosed and treated timely (3).

The methods that used to treat leakages are vary from laparotomy and skin drainage to endoscopic interventions (including the use of OTS and TTS clips, stents or fibrin stick) (3).

Ovesco Clip (OTSC) is an effective endoscopic technique and low-complication for the treatment and repair of gastrointestinal defects such as gastrointestinal bleeding, anastomotic leakage, fistula, polyp, variceal disease and perforation. This clip is like to a mouse trap made of superelastic alloy of nickel-titanium called nitinol, which acts like a surgical suture or staple and traps the area of a predetermined distance in the Bear trap site and helps restore it. Depending on the amount of force that applies to the tissue, it will allow adequate blood circulation supply to the tissue and prevent of necrosis. Also, due to its elastic properties, it does not prevent magnetic resonance imaging (4).

In a study published in 2016, Wedi et al. Reported the rate of the clinical and technical success of OTSC in anastomotic leakage repair about 100% (4).

In a study did by Sulz et al. as "Multipurpose Use of Ovesco Clip in the Gastrointestinal" on 21 patients between 2010 and 2014, 10 patients have underwent upper endoscopy and 11 patients have underwent lower endoscopy. Of the 10 patients who were underwent upper endoscopy and OTSC treatment, only two patients failed, one case had a fibrous fistula with 2 mm diameter and in another failure to access to the desired location because of esophageal obstruction. The two cases were treated with OTSC in second time, and the treatment was successfully completed. This treatment was not associated with any complications in any patients (5).

According to the increasing of surgical interventions to treat obesity and its side effects, such as leakage, follow-up and periodic follow-up of patients after surgery, it is important to identify early complications and life-threatening problems. And in the event of such complications, endoclips repair is the appropriate treatment (3).

CONFLICT OF INTEREST

The authors declare no conflict of interests related to this work.

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