Introduction

Gastrojejuno-colic fistula (GJCF) is the second non-malignant surgical cause of chronic diarrhea. The incidence rate is low. Soybel et al. [1] listed 108 published studies. If in the 1960s reports on 30 cases were not uncommon, in the last 20 years reports of no more than 5 cases were published, Puia et al. [2] quoted. GJCF may be caused by peptic ulcer disease, before or after stomach resection. It develops more frequently after the resection as a result of stomal ulcer. Incomplete resection or inadequate vagotomy might be the causes of the condition, or hypersecretion may be found in a patient. Since the 1990s, the number of stomach resection and other surgical procedures for peptic ulcer disease has been decreasing due to administering medical therapy such as proton pump inhibitors and anti-Helicobacter Pylori therapy. Presently, surgery is rarely performed. The aim of the study is to highlight the crucial symptom of non-malignant cause of GJCF-chronic diarrhoea, as well as the possibility of the fistula developing a decade or more after the initial surgery.

Case Report

A Case 60-year port

Old man was admitted to surgical department for the first time for clinical examination two years ago, after having been examined by other medical specialists. He mainly complained of occasional abdominal pain, chronic diarrhoea, and minor weight loss. Ten years prior, the patient had undergone resection of the stomach for peptic ulcer disease: Billroth II with R-y gastro-jejuno-anastomosis. The gallbladder was removed at the same time. He consumed 3 to 4 shot glasses of fruit brandy on a day-to-day basis. Laboratory tests were done several times. The first laboratory findings were within normal range and with no signs of malnutrition. Colonoscopy was negative, gastroscopy showed gastric erosion, while abdominal
ultrasound findings were normal. The patient was discharged from the hospital, being diagnosed with “enterocolitis” and received anti-ulcer and anti-enteritis therapy.

During the following year, the patient complained of persistent watery diarrhoea (3-4 times a day) and further weight loss, and thus he was referred three times to two tertiary institutions with suspicion of APUD tumour. Laboratory tests were performed several times, endoscopy of the upper GI tract was done two times, gastrojejunal examination was performed once by capsule endoscopy, and a colonoscopy was done. The diagnosis was not established. Two years after presenting with the same symptoms (diarrhoea, severe weight loss—more than 20kg), the patient was admitted for treatment. The new symptom was a feculent breath. An X-ray contrast examination was done (gastrografin enema and barium meal) and R-y gastrojejunoanastomotic-colic fistula was confirmed (Figure 1).

After restoring protein, albumin and electrolyte balance, the patient underwent surgery. The resection of gastrojejunal anastomosis with ulcer and a partially affected “T” transverse colon was performed. Reconstruction was done at the same time. Recovery was uneventful. The patient was discharged on the 12th day after the surgery. After discharge, the patient presented with postprandial vomiting and upper abdominal distension, so follow-up gastroscopy and contrast examination were performed, and it was confirmed that the transit was regular. The stool was normal, there was no feculent breath. The patient was treated conservatively for anastomosis and R-y stagnation syndrome. After 9-month follow-up, the patient remained well, with 15kg weight gain, and all laboratory tests and abdominal US examination were within normal range.

**Discussion**

Classic triad of symptoms related to GJCF includes weight loss, chronic diarrhoea and feculent breath. Pain is occasional and uncharacteristic. The patient was presented with the above-mentioned symptoms. In the present, the diagnosis of the complication is usually delayed. The reason for this is the time of the incidence, approximately 15-20 years after the original surgery, most frequently after Billroth II resection [3,4]. The most important diagnostic tools are endoscopy and contrast examination [5]. CT scan is used to assess the condition of nearby structures after diagnosis has been made. Contrast examination is more reliable than endoscopy (90-100%) [6,7]. Recently, endoscopy and colonoscopy have been recommended for the diagnosis of GJFC fistula to exclude other gastrointestinal diseases [8]. Kumar G et al. [9] state:

Gastroscopy and colonoscopy are not first line examinations for the gastrocolic fistula diagnosis, since the communication can be easily missed between the gastric folds or the colonic haustra, unless the fistulous orifice is big enough and can be visualized [9,10]. Our case study also shows that diagnosis was made by means of contrast examination, although endoscopy was repeated, including capsule endoscopy.

Since malnutrition is present with the patients, adequate pre-operative care is of great importance (albumin, protein, FE). In
1940-60s, a simple colostomy was recommended. Then followed the age of two or three-stage surgery [5]. This surgical strategy reduced mortality by 40%. The development of parenteral nutrition led to open single-stage surgery with primary reconstruction. It meant that a radical en-bloc resection was performed involving a re-resection gastrectomy, partial transverse colon and jejunum resection; restoration of bowel continuity was applied by gastroenterostomy and colocolostomy [10]. The presented case shows the mentioned treatment (Figure 2-5). The latest management of GJCF in a single-stage laparoscopic procedure has been proving its validity [11,12].

Figure 3: GJCF and nasogastric probe.

Figure 4: GJ anastomosis antecolica and colo-colo anastomosis.

Figure 5: GJ-anastomosis high above colonic anastomosis.
Conclusion

The case describes a rare disease since the number of surgeries for peptic ulcer disease has exceptionally decreased. Therefore, the diagnosis is delayed. GJCF results from gastric resection of the stomach, performed 10 years prior. Despite the contemporary methods of diagnostics, contrast examination was crucial and most effective. An adequate parenteral pre-operative care is of great importance in preventing leakage. Surgical treatment of choice is en-bloc resection.

References


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