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CASE REPORT

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Belching After Biliary Pancreatitis and Laparoscopic Cholecystectomy

Mersiha Cerkezovic[1], Denijal Tulumovic[2], and Mirnesa Muminovic Umihanic[1]

[1]Center for Primary Health Care, Zivinice, Bosnia and Herzegovina
[2]Department of Internal Medicine University Clinical Center, Tuzla, Bosnia and Herzegovina

Corresponding author: Mersiha Cerkezovic, MD. Center for Primary Health Care, Alije Izetbegovica br.17, 75270 Živinice. E-mail: cmersiha@hotmail.com

ABSTRACT

Introduction: Belching is often reported symptom. It is rarely an isolated disorder and mainly occurs within various gastroduodenal diseases. **Aim:** The aim is to show the great breadth of clinical symptoms of postcholecystectomy syndrome which should have a multidisciplinary therapeutic approach taking into account all aspects of patient's life. **Case report:** We report a case of excessive belching within postcholecystectomy syndrome which disturbs the general psycho-physical condition of the patient, with symptoms of depression and anxiety, and social isolation, which significantly reduces the quality of his life.
Key words: biliary pancreatitis, laparoscopic cholecystectomy, belching.

1. INTRODUCTION

Belching is normal physiological function which happens when swallowed air or air produced in gastrointestinal tract, accumulated in the stomach, squeezed out. Excessive belching is often reported symptom. It can disturb patient's daily life activities, decrease quality of life, or can be associated with various gastrointestinal disorders: gastroesophageal reflux disease, functional dyspepsia, aerophagia, rumination syndrome. Often other symptoms predominate, but sometimes patients only have a belching (1, 2).

Belching disorders, according to ROMA III classification of functional gastroduodenal disorders (3), comprises aerophagia (repetitive belching with evident excessive air swallowing-supragastric belching) and unspecified belching (no evidence air swallowing-gastric belching). Gas-related symptoms such as bloating, flatulence, belching are frequent after surgical operations in the abdomen, but it is not known how these symptoms affect the patient's general satisfaction with performed procedure, and what determines the severity of these complaints (4).

The article describes a case of excessive belching after acute mild biliary pancreatitis and cholecystectomy, associated with other functional gastroduodenal disorders, which disturb basic life activities and has a great impact on the mental functioning of the patient.

2. CASE REPORT

A male patient, age 57, was hospitalized in the Department of Internal Medicine University Clinical Center Tuzla, in July 2009, because of the pain in the upper abdomen, accompanied by nausea and vomiting of food in the last few months, and a slight loss of body mass (about 5 kg BM) in the last 4 months. Stools were occasionally fluent-gritty, normocholic. Abdominal ultrasonography (US) revealed the solitary stone of the gallbladder. After hospital admissions the pain was intensified, accompanied by fever, yellowing of the skin and visible mucous membranes. The patient consumes tobacco, no alcohol consumption. Laboratory tests have found elevated levels of non-specific markers of inflammation (CRP 24.7mg/l; LE-12.2x10^9), elevated biochemical markers (AST-163 U/l; ALT-163 U/l; GGT-935 U/l;

?AMY(s)-144 IJ/l; ?AMY(u) -2563 IJ/l; TBIL-73.4 μmol/l; DBIL59.69 μmol/l; IBIL-13.71 μmol/l; ALP-343 U/l). Abdominal and pelvic computed tomography (CT) examination with contrast revealed dilatation of the main bile duct to 12 mm with normal width of the lumen in the distal part, as well as unsafe signs of cholangitis and pericholecystitis. Other pathological substrate in the abdomen was not described. Endoscopic retrograde cholangiopancreatography (ERCP) did not find any obstruction of the pancreatic duct and bile duct. The patient, after conservative treatment, was discharged with a diagnosis of acute biliary pancreatitis with assumption of the spontaneous elimination of biliary calculus from the bile duct.

After two month hospitalization is repeated for the same symptoms, but without the yellowness of the skin and mucous membranes, and with the medical history for suspected melena. Esophagogastroduodenoscopy (EGDS) examination revealed hiatus hernia, a lot of yellow-green liquid content in the lumen of the stomach, with hyperemic mucous membrane of the antrum, and acute erosion, visible duodenogastritic reflux, which leads to gastritis biliary etiology. Colonoscopy finding was normal. Abdominal US did not find any pathological substrate in the abdomen and repeated biochemical parameters are within the reference values, except for slightly elevated C-reactive protein (CRP). The therapy is focused on duodenogastritic reflux disease and biliary gastritis by inhibitors proton pump and antibiotics. The existing symptoms (epigastric pain, abdominal bloating, early satiety, occasional heartburn) were slightly reduced, with the emergence of belching after the first hospitalization, which became more intense and more frequent after the second hospitalization (up to 10/min), which interferes with the patient's daily activities. Due to chronic inflammation of the gallbladder with earlier attack of acute pancreatitis, and persistent symptoms accompanied by excessive belching, after six months, surgery laparoscopic cholecystectomy was performed, without perioperative and early postoperative complications. Complaints were persistent, even the increased symptoms of frequent and intense belching, abdominal bloating, occasionally epigastric pain with vomiting of food content. There were no losses in weight, with normal biochemical parameters, with no signs of malnutrition. Stools were regular, orderly.

The biggest problem and difficulty the patient complained about was the excessive belching, regardless of food intake (10 times or more per minute), which created great discomfort and caused the symptoms of depression. In the next five years of ambulatory monitoring (EGDS, US, X-ray and CT examination of the abdomen and pelvis), pathological substrate was not verified. During EGDS control examination of the esophagus, stomach and duodenum, biliary reflux was found with hyperemic mucosa of the antrum of the stomach, and occasional presence mucosal erosiones on the bulbus duodeni. Barium swallow study (standard and in Trendeleburg's position) is mostly correct, except of verified smaller hiatal hernia, which cannot be the cause of patient's frequent belching (Figure 1).

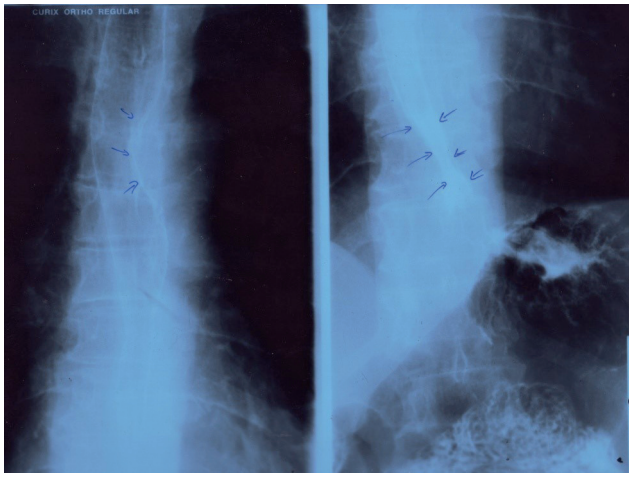

Figure 1. Barium Swallow Study (standard, in the Trendelenburg's position)

3. DISCUSSION

Gallstones and alcohol are the two main causes which make up more than 80% of acute pancreatitis. Cholecystectomy is the definitive treatment of gallbladder stones to prevent repeated attacks of acute biliary pancreatitis, and a laparoscopic procedure is preferable. The group of symptoms that occur after cholecystectomy is also known as "postcholecystectomy syndrome" (PHS). Depending on the study, PHS is found in 15-30% of patients with performed cholecystectomy. The real percentage of PHS is 10-15%. Peter et al. in their study showed that 28% of patients have mild form, 5% moderate form and 2% of patients have severe form of PHS. According to this study, in 26% of patients the cause of the PHS is afunctional disorder of biliary secretion (5). This clinical entity is manifested with many non-specific subjective complaints: nausea, feeling of fullness, early satiation, epigastricpain, heartburn, vomiting, belching, bloating, flatulance, regurgitation. When the diagnostic evaluation excludes other gastrointestinal lesions as a cause of these problems, duodenogastritic reflux (DGR) is usually blamed (6, 7). It is known that the biliopancreatic content (bile acids and trypsin) damaging the gastric mucosa and can be, individually, or in combination with the HCl and pepsin, the cause of gastritis. Comparing the degree of DGR before and after cholecystectomy, it is found that the DGR is greater in the treated patients after surgery than before surgery, and significantly stronger in those with papillotomy and destruction of Odd'ssphincter (8). Functional disorders of the gallbladder, damaged sphincter function, cholecystectomy and choledohoduodenostomy are accompanied with endoscopic biliary reflux.

Regardless of the mechanism and degree of bile reflux gastritis, patients with endoscopic biliary reflux have significant gastrointestinal symptoms (9).

Looking at this wider, the causes of postholecistectomy syndrome can be classified into three main groups. The first group of causes of postcholecystectomy syndrome includes the diseases existed before the operation along

with cholelithiasis, which was not previously diagnosed (e.g. ulcer disease, chronic gastritis, hiatus hernia, reflux esophagitis, chronic pancreatitis and others). The second group includes diseases that occur after cholecystectomy such as ulcer disease, neoplasms digestive tube, hiatal hernia, and symptoms which are unduly binding to cholecystectomy. The third group consists of patients who are during an operation were overlooked, surgical errors or the patients with the postoperative complications (e.g. postoperative hernias, abscesses, fistulas, adhesions, foreign bodies, hepatic lesions of common bile duct, bile duct stenosis, residual stones in bile ducts, Carolly disease, etc.) (10, 11).

Excessive belching is a rare symptom in isolation and is often associated with other esophageal symptoms, most commonly dysphagia (65%) and heartburn/regurgitation (95%). The exposure to pathological acids and hypomotility is associated with a higher frequency of supragastric belching disorders, the cause of belching is still unclear. Behavioral therapy and baclofen may help with predominance belching, but their benefit as part of "postcholecystectomy syndrome" remains to be tested (12).

4. CONCLUSION

Functional gastroduodenal disorders often remain after a successful completion of conservative and surgical procedures in the abdomen. Depending on the severity of symptoms, they can significantly affect the general quality of life, and they should not be neglected during the treatment protocols, in the terms of broad and multidisciplinary approach, as well as finding new mechanisms of control and treatment of these disorders.

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