

Diet and Postcholecystectomy Syndrome (PCS)

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Abstract

The postcholecystectomy syndrome (PCS) include: gastric discomfort, nausea, vomiting, flatulence, abdominal distention, diarrhea, or / and persistent abdominal pain. In the 1st Surgery Clinic, 4882 cholecystectomies were performed (1994 – 2012). In absence of etiopathogenical mechanism of PCS we can only use a symptomatic treatment. The proper diet can be a solution, and it is advisable to limit the food that can aggravate diarrhea, foods with a high content of fat, fried foods and sauces. Elevating the fiber quantity helps in normalizing the intestinal transit. Small and more frequent meals ensure a better combination of the alimentary chime with the available bile. An adequate meal should include small amounts of weak proteins, fish or chicken ,non-fat meat, accompanied by vegetables, fruit and cereals.

In conclusions, in case of functional PCS, the treatment is symptomatic, but an adequate diet may ameliorate or even remove the disabling symptoms.

Keywords: diet, postcholecystectomy syndrome, diarrhea, abdominal pain, fiber

1. Introduction

The postcholecystectomy syndrome (PCS) reunites symptoms such as: gastric discomfort, nausea, vomiting, flatulence, abdominal distention, diarrhea, or / and persistent abdominal pain in the region where the operation was performed. The term postcholecystectomy syndrome (PCS) describes the presence of symptoms after cholecystectomy [1].

In 1947, Womack and Crider first described PCS, defining it as the presence of symptoms after cholecystectomy [2]. These symptoms may actually represent either [1] the continuation of symptoms that had been interpreted as resulting from pathology of the gallbladder or [2] the development of new symptoms that might normally be attributed to the gallbladder.

PCS is caused by alterations in bile flow due to the loss of the reservoir function of the gallbladder . Two types of problems may arise. The first problem

is continuously increased bile flow into the upper gastrointestinal tract, which may contribute to esophagitis and gastritis with unpleasant symptoms which can become severe. The second consequence is related to the lower gastrointestinal tract, where diarrhea and colicky lower abdominal pain may result.

Complete preoperative evaluation is essential to minimizing this disease and that patients should be warned of the possibility of postoperative symptoms, which may start at any time from the immediate postoperative period to decades later [3,4].

The consensus opinion holds that the more secure the preoperative diagnosis, the lower the risk of PCS.

Study-to-study variability is great. PCS is found in 5-30% of patients, with 10-15% being the most reasonable range. McHardy found that 7.5% of

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patients with PCS required hospitalization [5]. The international incidence of PCS is almost identical to that in the United States. Peterli found that 65% of patients had no symptoms, 28% had mild symptoms, 5% had moderate symptoms, and 2% had severe symptoms [6]. Peterli also found that PCS was caused by functional disorders in 26% of patients, peptic disease in 4%, wound pain in 2.4%, stones in 1%, subhepatic fluid in 0.8%, and incisional hernia in 0.4%. Schoenemann found that functional disorders were the most common cause of PCS. Russello found 30% of patients with postcholecystectomy symptoms, 13% with PCS, and 10% with the same preoperative symptoms. Anand had 18% of patients with symptoms (24 mild; 7 severe). Freud found that 62% of patients had less severe symptoms than preoperatively, 31% had the same symptoms, and 7% had more severe symptoms [1-5].

Consensus is limited, but a proper preoperative workup and skilled surgery should include complete evaluation of the extrahepatic biliary tree.

The aim of this study was the therapeutic management of patients with PCS without known etiology.

2. Materials and Method

In the 1st Surgical Clinic, University of Medicine and Pharmacy "Victor Babes" Timisoara, Romania, County Hospital Timis, between February.1994 – February 2012 when 4882 cholecystectomies were performed.

Out of the total of 4882 cholecystectomies operated in 1st Surgery Clinic during 1994-2012, 3221 were performed laparoscopically (65,99%) while the conversion rate was 2,90% (93 cases). The laparoscopic approach either for diagnostic and operative purposes offers specific advantages to the patient compared to the classical operation (Figures 1 and 2).

The analysis of our material regards a number of 488 patients (9,99%) of total cholecystectomies who have developed PCS at different times after cholecystectomy.

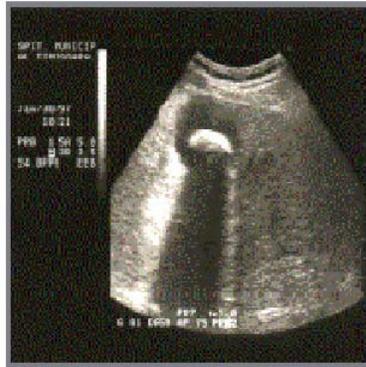


Figure 1. Ultrasound highlighting of gallstones



Figure 2. Laparoscopic cholecistectomy

3. Results and Discussion

In order to evaluate their health status and social professional reintegration, in approximately 10% of the cases, there have been found early or late symptoms that could be framed in PCS. Organic PCS, caused by biliary or extrabiliary symptoms represented only 15 % of all the pathogenic treated cases, the rest of 85% of functional PCS requiring symptomatic treatment and adequate diet.

We have selected a special group of patients who developed PCS, out of which 61 cases (12,5%) required hospitalization due to the severity of symptoms.

The cause of PCS was detected in 14,95% of cases, the rest of 415 patients only possibility to treat was the symptomatic treatment. Patients with irritable bowel disease may be helped with the use of bulking agents, antispasmodics, or sedatives. The irritable sphincter may respond to high-dose calcium channel blockers or nitrates, but evidence is not yet convincing. Cholestyramine has been of help for patients with diarrhea alone. Antacids, histamine 2 (H2) blockers, or proton pump inhibitors (PPIs) can occasionally provide relief for patients with GERD or gastritis symptoms. One study showed that lovastatin might provide at least some relief in up to 67% of patients.

In these cases at different time intervals the symptoms reappear, requiring treatment.

Table 1. PCS morbidity after cholecystectomy

Total nr. of cholecystectomy	From total (4882)	Percent
PCS	488	9.99%
PCS severe	61	12.5%

Table 2. Treatment of PCS

Total cases with PCS	From total (488)	Percent
Cured patients	73	14.95%
Unhealed cases	415	85.04%

In 5 – 40% cholecystectomies new symptoms have appeared, symptoms which affect the life quality of the patients who underwent the surgical operation.

Any post-operative syndrome rise special problems

regarding their etiology and their surgical treatment. In the absence of the etiopathogenical mechanism of those symptoms, after the removal of the gallbladder we can only use a symptomatic treatment.

The proper diet can be a solution, and it is advisable to limit the food that can aggravate diarrhea, foods with a high content of fat, fried foods and sauces. Elevating the fiber quantity helps in normalizing the intestinal transit. Small and more frequent meals ensure a better combination of the alimentary chime with the available bile.

An adequate diet after cholecystectomy should include small amounts of weak proteins, such as lacteous products, fish or chicken, non-fat meat, accompanied by vegetables, fruit and cereals. We have recommended this diet for patients with cholecystectomy. We obtained good results, none of these patients have not required hospitalization for symptoms framed in PCS syndrome.

4. Conclusion

Digestive sufferance or persistent abdominal pain, even after the removal of the gallbladder can be explained through the existence of a concomitant disease with the vesicular lithiasis, undiagnosed pre-operative, or by a post-operative adherential syndrome. Due to that, PCS may be included in the category of iatrogenic diseases.

In the case of functional PCS, the treatment is symptomatic, but an adequate diet may ameliorate or even remove the disabling symptoms.

Proper diet increase the quality of life of patients with cholecystectomy.

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