



The Role of Gender in Cholecystitis Complications

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ABSTRACT

Cholecystitis presents as acute or chronic. Severity of cholecystitis depends on several factors. Aim of this study was to evaluate severity of laparoscopic cholecystectomy findings based on gender type. In a retrospective and epidemiological study, a total of 101 patients who were underwent laparoscopic cholecystectomy were selected from 2001 to 2006 in university affiliated hospitals of Ahwaz, Iran. Among 101 patients were assessed in our study, 41(40.6%) were men and 60(59.4%) were women. Evaluating of patients according to sex revealed that proportion of empyema, gallbladder stones, gangrene, switch to open cholecystectomy, and acute cholecystitis were different statistically and were higher in men than women. But chronic cholecystitis was significantly lower in men than women. As our findings demonstrated, we suggest that men with cholecystitis need rapid surgical intervention to prevent and reduce complications of disease.

Keywords: Gender, Cholecystitis, Laparoscopy

INTRODUCTION

Gallbladder stones have high prevalence among gastrointestinal disorders. Developing gallstones are dependent on several factors including age, sex, and race. Obesity, pregnancy, nutrition habits, sickle cell disease, thalassemia have been identified to increase risk of gallstones. Women are three times more likely than men to develop gallstones, and its prevalence in the first-degree relatives of complicated patient is two times more (1). In most people gallstones develop without symptoms; although some of them also experience symptoms such as severe pain due to bile duct obstruction. Serious complications of gallstones are acute cholecystitis, pancreatitis, and colitis with or without collagen. Diagnostic procedures of gallstones include: computed tomography (CT) scan, ultrasonography, and typical symptoms in case of

symptomatic cholecystitis. Laparoscopic cholecystectomy is performed selectively in acute cholecystitis. Elective Laparoscopic cholecystectomy can be safely carried out in an outpatient setting. High prevalence of gallstones in the society directs research diagnosis, discovering causes, and treatment. Aim of this study was to assess the effect of gender on cholecystitis, using laparoscopic findings including empyema, gastrointestinal perforation, gangrene, and switch from laparoscopic to open cholecystectomy.

MATERIALS AND METHODS

In a retrospective and epidemiological study, a total of 101 patients who were underwent laparoscopic cholecystectomy were selected from 2001 to 2006 in university affiliated hospitals of Ahwaz, Iran. Inclusion criteria were women or men with acute or chronic cholecystitis from 30 to 70 years of age who need cholecystectomy. Exclusion criteria were bile duct stones, jaundice, perforated peptic ulcer, diabetes mellitus, and cardiovascular disease. Information about patient's age, gender, acute or chronic cholecystitis, empyema, gangrene, gastrointestinal perforation, gangrene, and switch from laparoscopic to open cholecystectomy were recorded. The analysis was carried out with SPSS version 17.

RESULTS

Among 101 patients were assessed in our study, 41(40.6%) were men and 60(59.4%) were women. Table 1 shows characteristics information of study's subjects. Evaluating of patients according to sex revealed that proportion of empyema, gallbladder stones, gangrene, switch to open cholecystectomy, and acute cholecystitis were different statistically and were higher in men than women. But chronic cholecystitis was significantly lower in men than women (Table 2).

Variable		
Men	41	40.6
Women	60	59.4
Less than 60-year-old	72	71.3
more than 60-year-old	29	28.7
Without empyema	95	94.1
With empyema	6	5.9
Without perforation	99	98.1
With perforation	2	1.9
Without gangren	87	86.1
With gangren	14	13.9
Laparoscopic cholecystectomy	92	91.1
Open cholecystectomy	9	8.9
Acute cholecystitis	47	46.5
Chronic cholecystitis	54	53.5

Table 2. Comparison of cholecystitis's complications between sex

Complication	Empyema	Perforation	Gangren	Switch to open surgey	Acute cholecystitis	Chronic cholecystitis
Men	83	100	78.6	100	68.1	16.7
Women	17	0	21.4	0	31.9	83.3
p-value	0.006	0.002	0.002	P<0.001	P<0.001	P<0.001

DISCUSSION

This study was conducted on 101 patients. In our study association of gallbladder empyema and gender was statistically significant. In similar study done by Al-Jaberi and et al. (2003) had been indicated that gallbladder empyema was more prevalent in men (3). In the study done by polychorinis and et al., a total of 1804 patients who were underwent cholecystectomy, from 1992 to 2004, They found that factors such as men, age of more than 60-year-old, surgery of upper abdominal, diabetes, severity of inflammation were associated with switch to open surgery (4). Our results about prevalence of gallbladder perforation in sex type showed high prevalence in men. It is in accordance with study of Stefanidis and et al. (2006) (5). Our results showed high prevalence of gallbladder gangren in men. Merriam LT and et al, (1999) studied on 154 patients in USA. They found that risk of gallbladder gangrene and then switch to open surgery is higher in men who are more than 50-year-old (6). In a study by Gharaibeh and et al. (2001) 995 patients from 1994 to 1999 who underwent laparoscopic cholecystectomy were evaluated. They showed that 791 patients were with acute cholecystitis and 204 patients with chronic cholecystitis. From those with acute cholecystitis, 27.8 % were needed to open surgery. From 27.8 %, 4% were women and 23.8 were men. From those with chronic cholecystitis 0.76 % performed open surgery. Based on their results, they concluded that acute cholecystitis needs more open surgery than chronic cholecystitis (8). In our study factors such as empyema, gallbladder perforation, and switch to open surgery, acute cholecystitis, and gender were evaluated. All these factors were higher in men than women. Therefore, man factor was key element in increasing risks of cholecystitis's complications. Although, acute cholecystitis was higher in men, and chronic cholecystitis was higher in women.

CONCLUSION

As our findings demonstrated, we suggest that men with cholecystitis need rapid surgical intervention to prevent and reduce complications of disease.

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