

Selection of Operative Method for Patients with Acute Cholecystitis Preoperative Scoring System

Type: Mini-Review

Received: December 02, 2024

Published: December 13, 2024

Citation:

Igor Cerni. "Selection of Operative Method for Patients with Acute Cholecystitis Preoperative Scoring System". PriMera Scientific Surgical Research and Practice 5.1 (2025): 05-07.

Copyright:

© 2025 Igor Cerni. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Igor Cerni*

Department of Abdominal Surgery, General Hospital Celje, Slovenia

***Corresponding Author:** Igor Cerni, MD, MS, Department of Abdominal Surgery, General Hospital Celje, Slovenia.

Abstract

Aims: The article describes the impact of various prognostic elements (CRP, age, duration of symptoms, operator skills, US examination) on the selection of operative method for patients with acute cholecystitis, and consequently displays the suggested preoperative scoring system.

Methods: The retrospective survey included patients operated for acute gallbladder inflammation during the period 2019-2023. Patients were divided into three groups: age (below 30, from 30-60, and above 60), CRP value (CRP<50mg/l, 50-100mg/l, CRP>100mg/l), duration of symptoms (below 3 days, 4-7 days, over 7 days), US examination (wall thickness 2mm, 4mm, more than 4mm), operator skill level (less than 50 operations a year, from 50-70 annually, over 70 annual operations). Each prognostic element was relevantly assessed, and resulted in the elaboration of preoperative scoring system for the laparoscopic cholecystectomy (LCH).

Results: During the indicated three years period 339 patients were operated; of those, 46.6% underwent the laparoscopic method, while 14.2 % needed conversion. Average CRP value in patients with LCH was 84.6mg/l, while the traditional open method indicated 125.5mg/l. Average duration of symptoms in LCH amounted to 2.7 days, and in traditional open method 4.1 days. Mean age of patients treated with laparoscopic method was younger (58.3 years), while the US examination both in LCH and the traditional open method indicated average wall thickness of 2-4 mm. Most LCH operations were performed by operators with over 70 performed annual operations. Screened patients over 60 years of age, CRP values exceeding 100mg/l, and duration of symptoms in excess of 7 days indicated significantly increased number of conversions, resulting in decisions for immediate open method cholecystectomy. Experience level of the operator significantly affected the percentage of conversions and consequent decisions for immediate open cholecystectomy ($p<0.01$). Each element was statistically evaluated and scored from 1-3, and the results were used in devising a scheme for preoperative classification of patients – preoperative scoring system (PSS).

Conclusion: Preoperative scoring system represents valuable reference for the operator in selecting the method of operation for patients with acute cholecystitis. Whilst any patient exceeding the PSS 11 is not suitable for LCH since there is almost 100% probability of conversion, the patients with PSS ranging from 5-9 are likely material for the LCH.

Introduction

Calculous cholecystitis is the most common, and usually less serious, type of acute cholecystitis. It accounts for around 95% of all cases.

Calculous cholecystitis develops when the main opening to the gallbladder, the cystic duct, gets blocked by a gallstone or a substance known as biliary sludge.

Biliary sludge is a mixture of bile, a liquid produced by the liver that helps digest fats, and small cholesterol and salt crystals.

The blockage in the cystic duct causes bile to build up in the gallbladder, increasing the pressure inside it and causing it to become inflamed. An inflamed gallbladder can sometimes become infected by bacteria.

Acalculous cholecystitis

Acalculous cholecystitis is gallbladder inflammation without gallstones. It's less common, but usually more serious, than calculous cholecystitis.

The exact cause of acalculous cholecystitis is not known, but it's usually a complication of a serious illness, infection or injury that damages the gallbladder.

A combination of risk factors may lead to acalculous cholecystitis, including accidental damage to the gallbladder during major surgery, serious injuries or burns, sepsis, severe malnutrition or dehydration.

Treating acute cholecystitis

If you're diagnosed with acute cholecystitis, you'll probably need to be admitted to hospital for treatment.

How to treat acute cholecystitis - operatively, open surgery, laparoscopic surgery?

It is very useful to know the scoring system.



Figure 1: Cholecystitis acuta gangrenosa (endoscopic view).



Figure 2: Cholecystitis acuta gangrenosa.