



Complete Summary

GUIDELINE TITLE

Treatment of gallstone and gallbladder disease.

BIBLIOGRAPHIC SOURCE(S)

Society for Surgery of the Alimentary Tract, Inc. Treatment of gallstone and gallbladder disease. J Gastrointest Surg 1998 Sep-Oct;2(5):485-6. [12 references] [PubMed](#)

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SCOPE

DISEASE/CONDITION(S)

- Gallstone and gallbladder disease
- Acute cholecystitis, gallstone pancreatitis, choledocholithiasis (common duct stones), and cholangitis

GUIDELINE CATEGORY

Evaluation
Risk Assessment
Treatment

CLINICAL SPECIALTY

Gastroenterology
Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To guide primary care physicians to the appropriate utilization of surgical procedures on the alimentary tract or related organs.

TARGET POPULATION

Patients with symptomatic gallbladder stones

INTERVENTIONS AND PRACTICES CONSIDERED

1. Cholecystectomy: laparoscopic and/or open procedures for removal of gallstones
2. Endoscopic and surgical approaches for removal of common duct stones

MAJOR OUTCOMES CONSIDERED

- Pain relief
- Bile duct injury rate
- Length of hospital stay
- Mortality due to cholecystectomy

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The Society for Surgery of the Alimentary Tract (SSAT) guidelines are based on statements and recommendations that were overwhelmingly supported by clinical evidence. Each represents a consensus of opinion and is considered a reasonable plan for a specific clinical condition.

(See companion document Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.)

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A cholecystectomy is cost effective compared to alternative treatments since it definitively treats the disease and reliably alleviates the symptoms. There appears to be no significant cost savings between laparoscopic and open cholecystectomy, with the savings from shorter hospital stay for laparoscopic cholecystectomy offset by higher operating room costs.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guidelines were reviewed by several committee members and then by the entire committee on several occasions. Each guideline was then sent back to the original author for final comment and reviewed again by the committee. Each guideline was approved by the Board of Trustees of the Society for Surgery of the Alimentary Tract and final comments were reviewed by the committee.

(See companion document Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2:483-484.)

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

Treatment

A surgeon should see the patient within a few weeks if the acute episode has resolved or symptoms are mild. A surgeon should see patients with significant right upper quadrant tenderness, fever, or elevated white blood cell count the same day.

The presence of gallstones without abdominal symptoms is not an indication for cholecystectomy unless there is a predisposition for malignancy, i.e., the gallbladder wall is calcified or the gallstones are greater than 3 cm in diameter. Once a patient with gallstones develops unexplained pain in the upper abdomen, elective cholecystectomy is indicated. The primary indication for urgent cholecystectomy is acute cholecystitis. Gallstone pancreatitis, choledocholithiasis (common duct stones), and cholangitis require surgical consultation. Cholecystectomy may be indicated if symptoms meet the criteria of biliary pain, but in the absence of gallstones, as in acalculous cholecystitis. Cholecystectomy may be performed using laparoscopic techniques or through an abdominal incision. The advantages of the laparoscopic approach are shorter hospital stay, faster return to normal activity, and minimal abdominal scarring. Its disadvantages include a two-dimensional view of abdominal contents and inability to palpate surrounding abdominal organs such as the bile duct.

Alternative, non-standard forms of treatment include dissolution of gallstones with oral agents, extracorporeal shock wave lithotripsy, and instilling solvents directly into the gallbladder. Oral dissolution therapy is neither efficacious nor cost-effective. The Food and Drug Administration (FDA) does not approve shock wave lithotripsy or contact dissolution.

Conversion of Laparoscopic Cholecystectomy to an Open Procedure

Although a laparoscopic approach is feasible in most patients, conversion to an open procedure is occasionally required because of the presence of adhesions, difficulty in delineating the anatomy as with acute inflammation, or a suspected ductal injury. Thus, conversion to an open procedure may avoid complications. Conversion is more often necessary in elderly patients and those with prior upper abdominal operations, a thickened gallbladder wall, or acute cholecystitis. The incidence of conversion to an open procedure is 5 to 10%, depending on the patient population.

Treatment of Common Duct Stones

Common duct stones may be removed either endoscopically or surgically. The endoscopic approach is indicated for patients with cholangitis, obstructive

jaundice, and in selected patients with gallstone pancreatitis. Endoscopic clearance of common bile duct stones is an effective treatment, but is associated with a definite risk of pancreatitis, bleeding or perforation. Surgical removal of common bile duct stones can be performed using laparoscopic techniques with appropriate equipment and surgical expertise. Open cholecystectomy with common bile duct exploration is a safe and effective treatment, especially in the acutely ill. Since most common duct stones arise from the gallbladder, cholecystectomy is also indicated unless the patient is a poor operative risk.

Costs

Cholecystectomy is cost effective compared to alternative treatments since it definitively treats the disease and reliably alleviates the symptoms. There appears to be no significant cost savings between laparoscopic and open cholecystectomy, with the savings from shorter hospital stay for laparoscopic cholecystectomy offset by higher operating room costs.

Qualifications for Performing Surgery on the Gallbladder

At a minimum, surgeons who are certified or eligible for certification by the American Board of Surgery, the Royal College of Physicians and Surgeons of Canada, or their equivalent should perform laparoscopic and open cholecystectomy. In addition to the standard residency training, qualifications should be based on training, experience, and outcomes.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

After undergoing cholecystectomy for biliary pain, 95% of patients are relieved of the pain.

The advantages of the laparoscopic approach to cholecystectomy are a shorter hospital stay, faster return to normal activities, and minimal scarring.

POTENTIAL HARMS

In patients undergoing elective cholecystectomy, the risks are exceedingly low. Risks related specifically to cholecystectomy include injury to the bile ducts,

retained stones in the bile ducts, and injury to surrounding organs. The bile duct injury rate is approximately 0.5% for laparoscopic cholecystectomy and is slightly higher than the rate for open cholecystectomy. The chance of death in a good risk patient undergoing elective operation is less than 1%. The mortality rate for acute cholecystitis is similarly low unless the patient requires an emergency operation. The risks are usually from co-morbid conditions such as cardiac or pulmonary disease.

In the treatment of common duct stones, endoscopic clearance is an effective treatment but is associated with a small risk of pancreatitis, bleeding or perforation.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These guidelines have been written by the Patient Care Committee of the Society of Surgery of the Alimentary Tract (SSAT). Their goal is to guide PRIMARY CARE physicians to the appropriate utilization of surgical procedures on the alimentary tract or related organs and they are based on critical review of the literature and expert opinion. Both of the latter sources of information result in a consensus that is recorded in the form of these Guidelines. The consensus addresses the range of acceptable clinical practice and should not be construed as a standard of care. These Guidelines require periodic revision to ensure that clinicians utilize procedures appropriately but the reader must realize that clinical judgement may justify a course of action outside of the recommendations contained herein.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Timeliness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Society for Surgery of the Alimentary Tract, Inc. Treatment of gallstone and gallbladder disease. J Gastrointest Surg 1998 Sep-Oct; 2(5): 485-6. [12 references] [PubMed](#)

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 (revised 2000)

GUIDELINE DEVELOPER(S)

Society for Surgery of the Alimentary Tract, Inc - Medical Specialty Society

SOURCE(S) OF FUNDING

Society of Surgery of the Alimentary Tract, Inc.

GUIDELINE COMMITTEE

Patient Care Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Names of Committee Members: Thomas R Gadacz, MD (Chairman); L William Traverso, MD; Gerald M Fried, MD; Bruce Stabile, MD; Barry A Levine, MD.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the [Society for Surgery of the Alimentary Tract, Inc. Web site](#).

Print copies: Available from the Society for Surgery of the Alimentary Tract, Inc., 900 Cummings Center, Suite 221-0, Beverly, MA 01915; Telephone: (978) 927-8330; Fax: (978) 524-8890.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Gadacz TR, Traverso LW, Fried GM, Stabile B, Levine BA. Practice guidelines for patients with gastrointestinal surgical diseases. J Gastrointest Surg 1998;2: 483-484.

Electronic copies: Not available at this time.

Print copies: Available from the Society for Surgery of the Alimentary Tract, Inc., 900 Cummings Center, Suite 221-0, Beverly, MA 01915; Telephone: (978) 927-8330; Fax: (978) 524-8890.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on March 28, 2000. The information was verified by the guideline developer as of May 30, 2000.

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