

Silent gallstones

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Introduction

Cholelithiasis is common world-wide

The commonest cause of hospitalization and surgery in most of the hospitals.

Prevalence of gallstones is 10-25% and it increases by age, approximately by 1% per year, reaching as high as 60% by the age of 80 years.

Introduction

More people are diagnosed with gallbladder stones, with ever increasing frequency, in our daily clinical practice due to widespread use of routine ultrasonography for evaluation of various abdominal or pelvic complaints which may well be unrelated to the gallstone disease.

Introduction

The majority of gallstones, up to 70-80%, is asymptomatic at the time of diagnosis and only about 10-20% produce symptoms in a life time.

Management of such incidentally discovered Silent gallstones is a real dilemma for doctors and patients alike.

Silent gallstones

Silent gallstones is defined as those having caused no symptoms or the ones detected incidentally during investigations in the absence of gallstone-related symptoms (biliary colic) or complications .

Non-specific abdominal symptoms, for example dyspepsia, epigastric discomfort, flatulence or nausea are not considered as gallstone-related symptoms.

Natural history of Silent gallstones

Gallstone disease is a benign condition because 70-90% of patients remain asymptomatic. Several studies have shown that the natural history of incidentally discovered gallstone is not only benign but even when they do develop complications, it is usually preceded by at least one episode of biliary pain.

Natural history of Silent gallstones

- Studies on long-term follow-up of individuals with asymptomatic gallstones have shown that over a 20-year period only 20% will develop biliary pain and the mean probability of developing pain is only 2% during the 1st five years, 1% during the 2nd, 0.5% in the 3rd and 0% during the 4th five years.

Natural history of Silent gallstones

In other words, the longer the stones remain asymptomatic, the less likely it is that complications will occur. In about 30%, patients who have had pain do not have further episodes of pain. Thus, for persons with asymptomatic gallstones, the natural history is so benign that not only treatment but also a regular follow-up is not recommended.

Natural history of Silent gallstones

- Certain special conditions, like patients on long-term parental nutrition have an increased incidence of both calculous and acalculous cholecystitis.
- End-stage renal disease is another risk factor for cholelithiasis and up to 28% of patients on regular dialysis develop gallstones. Like naturally occurring asymptomatic stones, 80% of these stones remain asymptomatic.

Which Silent gallstones develop symptoms?

- From both the patient's and the physician's point of view, it would be very useful, medically and legally, to recognize the subgroup of Silent gallstone patients who will develop symptoms or complications.
- It is not possible to pinpoint factors, either local or general to predict who or when one will develop symptoms or complications.

Which Silent gallstones develop symptoms?

- Low-risk - functioning gallbladder with small stones 3-20mm, without co-morbid conditions.
- High-risk groups - large stones >2.5cm and multiple tiny stones <3mm, obliterating cystic duct.
- Patients with at least 1 gallstone smaller than 5 mm and a number of stones over 20, each have a more than 3-fold increased risk of presenting with acute gallstone pancreatitis, as observed in Korean patients.

Silent gallstones and laparoscopic cholecystectomy

- After the introduction and widespread use of laparoscopic cholecystectomy, a significant change has been observed possibly due to the attitude of surgeons to relax the indication of surgery, including for silent gallstone, resulting in an increase (of up to 60%) in cholecystectomies worldwide .

Silent gallstones and laparoscopic cholecystectomy

- Laparoscopic cholecystectomy in young patients with uncomplicated, silent gallstones is safe with greater patient acceptance and this approach in early age eliminates the need for problematic surgery at a later date when the patient is older, with associated diseases or with complications.

Silent gallstones and laparoscopic cholecystectomy

- The increase in laparoscopic cholecystectomy, especially in silent stones, may also be due to counseling by the primary physician (and many a time surgeon) with warning the patients about future complications causing anxiety and fear without exploring in depth the natural history of silent gallstones.

- we must also think of the increased burden and cost to the society and health care system because of this unnecessary major surgery while counseling patients about this controversial condition of silent gallstone.

Silent gallstones in special circumstances

Diabetes

- Traditionally, silent gallstones in patients with diabetes have been thought to be at higher risk of developing symptoms and complications like infection, gangrene and perforation, possibly because of autonomic neuropathy in such patients which may mask the pain and features of acute cholecystitis causing delay in diagnosis. And therefore, prophylactic cholecystectomy has been recommended in the past in diabetic patients with silent gallstones.

- However, this dictum has been challenged by several studies and observation of natural history, that, as in general population, silent gallstones in diabetics do not carry higher risk and in these patients the surgical morbidity and mortality is comparable to non-diabetics once other co-morbidities such as cardiovascular or renal disease are taken into consideration.

Pregnancy

- Asymptomatic biliary sludge develops frequently (26% to 31%) during pregnancy, and spontaneously disappears after delivery. New gallstones occur less frequently (2-5%) during pregnancy but these stone may disappear after delivery.

Gallbladder carcinoma

- only 1 or 2% of patients with stones develop cancer.
- But, when we consider the risk of developing cancer in 'all' of the patients with silent gallstones, it is less than 0.01%, which is less than the mortality associated with cholecystectomy.
- Thus, both patient and surgeon should acknowledge these facts and take into consideration that prophylactic cholecystectomy is not a therapeutic strategy to prevent the development of gallbladder cancer.

Non-hemolytic pediatric patients

- Unlike adults, children can not give clear and timely clinical history and need slightly different management to prevent complications. In an asymptomatic child younger than 3 years of age, if echogenic shadows are present for at least 12 months following resumption of oral feeding or when the gallstones are radiopaque or true stones with echogenic shadowing (not echogenic sludge), these children should undergo surgery.

Hemolytic pediatric patients

- Gallstones are common in hemolytic anaemia , as high as 57%. Even though 30% of these stones are silent, elective cholecystectomy, preferably laparoscopic, is recommended because of the increasing longevity and to simplify medical management by eliminating the diagnostic confusion between acute cholecystitis and sickle cell crisis.

Patient's wish

- This is probably the most difficult situation whether to proceed to surgery in asymptomatic gallstones simply because the patient wishes to be operated.
- Factors which may be taken into consideration include various special situations discussed above, patient's and surgeon's attitude together with medico-legal issues.

Conclusion

- Controversies in optimum management of silent gallstones persist.
- Consulting physicians, treating surgeons and patients alike all should take into account the natural history of silent gallstones before making a decision to proceed to cholecystectomy, and laparoscopic surgery should not broaden or relax the indication for asymptomatic gallstones.

Conclusion

- All concerned should be fully informed that the majority of silent patients rarely develop symptoms or complications without at least one 'warning' biliary 'colic'.
- Cholecystectomy, with modern facility and safe anesthesia, can be performed safely when an silent gallstone turns symptomatic, with almost equivalent result to routine elective surgery.

Conclusion

- Silent gallstones, except in certain high-risk groups and under special circumstances, should be left 'silent' with 'wait and watch' policy, and active involvement of the patient in the process of decision making.

Thank you all