ACUTE ACALCULOUS CHOLECYSTITIS

(A Report Of Three Cases)

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Introduction

Acute acalculous cholecystitis is a form of acute cholecystitis which occurs in the absence of gall stones or any demonstrable pathology of the gall bladder or the biliary tree. Though a variety of predisposing factors have been defined, the pathogenesis remains unclear.

The clinical presentation is similar to that of acute cholecystitis, with right upper abdominal quadrant pain and tenderness, leucocytosis and occasional laboratory evidence of cholestasis. The differentiating feature is the absence of gall stones. The diagnosis is still rather uncommon because few clinicians entertain it in the absence of cholelithiasis, and, in instances, this aspect is often overshadowed by other more dominant features of the patient. However increasing awareness and easier access to ultrasound has resulted in this entity being diagnosed with increasing frequency.

The aim of this paper is to draw attention to this clinical entity, discuss its management and review the literature on the subject.

CASE REPORTS

Case No.1

A male child aged 3 years presented with high fever (39.2°C), diarrhoea and pain abdomen of a week's duration. He was ill looking, toxic and dehydrated on admission. In addition to tachycardia, there was abdominal distention with a positive Murphy's sign and a palpable tender gall bladder with localised muscle guarding. There was no icterus. Laboratory investigations revealed polymorphonuclear leucocytosis (92%) with toxic granules; the LFT being normal. Abdominal ultrasound con-

firmed a grossly distended gall bladder with normal walls, no calculi, and a normal CBD. Entertaining a diagnosis of acute acalculous cholecystitis, the patient was managed conservatively with I.V. fluids, antibiotics and symptomatic measures. His condition improved with fever, gall bladder distention and leucocytosis reverting to normal. The abdominal ultrasound repeated after 10 days showed a normal gall bladder and biliary tree. The patient was asymptomatic till discharge and continued to remain so till 18 months later.

Case No. 2

A thinly built female aged 24 years presented with clinical features of acute cholecystitis and jaundice. She was febrile, jaundiced, with a positive Murphy's sign, though the gall bladder was not palpable. Laboratory investigations revealed a polymorphonuclear leucocytosis, serum bilirubin 2.8 mg%, and alkaline phosphatase 22 KA units. Abdominal sonography showed the gall bladder to have thickened edematous walls with intraluminal sludge, but no calculi. The CBD was reported normal. The patient was managed on conservative lines, with IV fluids and antibiotics as a case of acute acalculous cholecystitis, based on the ultrasound findings. On recovery, the parameters returned to normal, and a repeat ultrasound at two weeks showed only a residual edema of the gall bladder wall but no sludge or calculi. This also reverted to normal in due course of time. The patient was asymptomatic with normal ultrasound of the biliary tract on a year's follow up.

Case No. 3

A serving soldier aged 43 years presented with typical features of acute cholecystitis and associated jaundice. Clinical examination revealed a positive Murphy's sign but no palpable gall bladder. The serum bilirubin level was 3.2 mg%, and the alkaline phosphatase 18 KA units. Abdominal ultrasonography revealed a gall bladder with thickened edematous walls, intra-luminal sludge but no calculi. This patient was also managed conservatively with full recovery. He was followed up for a year, all biochemical parameters being normal, and the ultrasound repeated on three occasions confirming the absence of calculi in the gall bladder and the biliary tract.

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Discussion

Acute acalculous cholecystitis occurs in less than 1% of all cases of acute cholecystitis [1]. The incidence is much higher in the paediatric age group [2] than in adults, where it is reported to vary from 1.5 to 10% [2,3]. Of the three cases in the present series, one was in the paediatric age group and two were adults.

A multitude of predisposing factors such as acute illness in childhood, specific fevers, extensive burns, polytrauma, and major surgical procedures (non-biliary) have been attributed as the cause [1,2,4-6]. The pathogenesis which is probably multifactorial includes a possible biliary stasis, increased bile viscosity and lithogenicity, and gall bladder ischaemia [1,7]. Except in the first case reported in this series, where an acute febrile illness could perhaps have been a causative factor, no predisposing or pathogenic factors could be attributed.

The clinical features are indistinguishable from those of acute cholecystitis, except for the obvious absence of gall stones. Evidence of cholestasis with elevated serum bilirubin and alkaline phosphatase is uncommon, [5,7] and was encountered in two cases. Ultrasound is the most readily available and perhaps the best investigative facility. CT scan and cholescintigraphy may also be useful, but the accuracy of the latter is debatable [1,7]. The characteristic features is a thickened and edematous wall of the affected gall bladder, 4mm or more. Features such as subserosal edema and pericholecystic fluid collection have also been described. The hallmark is, of course, the absence of gall stones. Occasionally biliary sludge, perhaps inflammatory de-

bris in origin, may be seen.

Majority of authors are of the opinion that the treatment of the condition is an emergency or semi-emergency cholecystectomy [1,2,4,7]. In the critically ill, ultrasound guided per cutaneous cholecystostomy has also been described [7]. Termberg and Keating [5] opine that the condition should be treated as an undrained abscess. In the present series, management on conservative lines was advocated with a view to avoid surgical intervention in an acute phase particularly so in an ill patient. The treatment comprised essentially of IV fluids, antibiotics and supportive measures. The outcome in all the cases was favourable with a good response. The biochemical parameters and ultrasonographic findings reverted to normal, and the patients did well on follow up. It is thus suggested that a conservative approach is worth a trial prior to consideration of surgery if undertaken at all.

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