



Conservative treatment of Acalculus cholecystitis and no recurrent episode in long term follow up

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Abstract

Objective: *Acalculus cholecystitis is rare disease as compared to calculus cholecystitis. It is commonly seen in elderly and critically ill patients. Majority of patients with acute acalculus cholecystitis are managed with emergency surgery. On many occasions surgical management is inevitable in view of gangrene and perforation. Conservative treatment of Acute acalculus cholecystitis is a rarely practiced. Here, we discuss two cases of acute acalculus cholecystitis managed conservatively. They did not develop any recurrent episode of acalculus cholecystitis after long term follow up of more than 5 years.*

Case Demonstration: *(Case 1) A 64 years old male presented with fever and severe right hypochondriac pain with 2 episodes of vomiting. On clinical examination, he was vitally stable with mild tenderness in right hypochondriac region. Necessary blood investigations were done and USG abdomen and CT abdomen showed findings suggesting acute acalculus cholecystitis as the diagnosis. He was given a course of I.V. antibiotics which slowly improved his condition and was given DVT prophylaxis and now even after 7 years, he is symptom free and healthy. (Case 2) A 68 years old know diabetic male presented with sudden onset severe pain in right hypochondriac region with severe distension of abdomen, breathlessness and difficulty in talking. On clinical examination, he was conscious and oriented. P/A was grossly distended with tenderness more pronounced in right hypochondriac region. Necessary blood investigations were done and USG and CT scan revealed findings which were suggestive of acalculus cholecystitis. He was given a course of I.V. antibiotics and necessary DVT prophylaxis along with his standard antidiabetic medication and after more than 4 years he remains asymptomatic.*

Conclusion: *In subset of patients with acute acalculus cholecystitis who are managed conservatively, surgery can be avoided in long term as they may not develop recurrent episode.*

Introduction

Acalculous cholecystitis is inflammation of gall bladder without any evidence of gall stone disease. Acalculus cholecystitis is a much rare disease as compared to calculus cholecystitis, later is seen very commonly in surgical practice. Acalculus cholecystitis is commonly seen in

elderly and critically ill patients. Conservative treatment for mild to moderate episode of acalculus cholecystitis is indicated in critically ill patients in order to avoid complications of emergency surgery. There are very few case studies in literature describing conservative treatment of acalculus cholecystitis and there are

no randomized controlled trials because of rarity of disease. There are no studies of case reports which describe long term follow up of conservatively managed cases of acalculus cholecystitis. In this case report we present two cases of acute acalculus cholecystitis managed conservatively and their long term follow up of more than 5 years. Literature on conservative treatment of acute acalculus cholecystitis is also reviewed.

Case Report

Case 1

64 yrs old male presented in year 2015 with acute onset severe pain in right hypochondriac region since last 1 days associated with fever. He had two episodes of vomiting at the time of presentation.

On clinical examination, He had pulse of - 76 / min, blood pressure of - 160 / 80 mm of Hg, PA – distended with mild tenderness present in epigastric region and right hypochondriac region. His blood investigation showed Hb 15 gm/dl, WBC count of 14,600/cmm. Serum creatinine of 1.15 mg/dl. SGOT 52 IU/L and SGPT 59 IU/L, Total bilirubin of 1.1 mg/dl and direct bilirubin of 0.5 mg/dl His Serum sodium was 137 meq/L, potassium of 3.8 meq/L and Chloride of 100 meq/L, Serum amylase was 34.8 U/L Urine routine was normal. USG abdomen showed distended gall bladder without any gall stones. CT abdomen done - showed severe distention of gall bladder with inflammatory changes around that without any gall Stones. These finding suggested acute acalculus cholecystitis as diagnosis.

He was initially treated with Inj. Ciprofloxacin and Inj. Metronidazole however he remained critical and did not respond to treatment hence antibiotic was changed to Inj. Meropenem on day 3 of admission. He was also given T. Aspirin 75 mg once a day and Inj. Enoxaparin 40 mg Once a day as a part of DVT prophylaxis. He showed symptomatic improvement on day 5 of admission and he was discharged in completely healthy condition after 10 days. Today more than 7 years

after the episode of acalculus cholecystitis he remains completely symptom free.

Case 2

68 years old male, a known case of DM on treatment. He was not having Hypertension. He had presented in year 2018 with sudden onset severe pain in right hypochondriac region since the night before. Nausea, No fever, No urinary complaint. He had complained of severe distention of abdomen. He also complained of breathlessness and difficulty in talking.

On Examination - He was conscious and oriented with Pulse -103 / min and BP-170/92 mm of Hg Abdomen was grossly distended and there was tenderness all-over abdomen which was more pronounced in right hypochondriac region. Bowel sounds were absent. He had SpO₂-98% on room air.

His blood investigations showed Hb of 11.5 gm/dl, WBC count of 13,400/cmm. BUN 14.4 mg/dl, S. Creatinine 0.9 mg/dl, SGOT 62 U/L, SGPT 54 U/L, S. Alkaline Phosphatase 83 U/L, S. Total Bilirubin 1 mg/dl, Direct Bilirubin 0.4 mg/dl He had Fasting blood sugar of 199 mg/dl and Post lunch blood sugar of 390 mg/dl, HbA1c 11.4 Serum Amylase was 28 U/L

His USG abdomen showed Gall bladder was distended and shows thickened GB wall measuring 6.3 mm. No evidence of calculus or sludge was seen. There was Minimal Ascites and Minimal Right pleural effusion. CT scan of abdomen and pelvis showed distended gall bladder with enhancing mildly thickened wall is seen with adjacent fat stranding with No evidence of calculus or mass lesion. These findings were suggestive of acalculus cholecystitis.

He was started Intravenous antibiotic with Inj. Ceftriaxone 1 gm BD, Inj. Flagyl 500 mg TDS. He was also given T. Ecosprin 75 mg Once daily with Inj. Enoxaparin 40 mg once a day as DVT prophylaxis. He was given standard antidiabetic medications and blood sugars were strictly controlled. He started having relief of symptoms from day 3 of admission and He was completely

settled by day 8 of admission and was discharged. Today more than 4 years after the episode of acalculus cholecystitis he remains completely free from symptoms.

Review of Literature

Multiple factors contribute in pathogenesis of acute acalculus cholecystitis such as – non-functioning and inadequate emptying of gall bladder, Severe distention of gall bladder, gallbladder wall ischemia, bile excretion disorder and secondary bacterial infection, even viral infections are known to cause acute acalculus cholecystitis. Gall bladder anomalies resulting in twisting of gall bladder can cause acute acalculus cholecystitis in children.⁽¹⁾

Ischemia of gall bladder plays an important role in the pathogenesis of acute acalculus cholecystitis. gallbladder artery is an end artery also called as terminal artery with very few anastomotic channels resulting in ischemic necrosis of the gallbladder wall causing gangrene and perforation.⁽²⁾

Acute acalculus cholecystitis is commonly seen in critically ill, diabetic and elderly sick patients. On Many occasion emergency surgery of acute acalculus cholecystitis is inevitable in view of perforation and gangrene. Majority of them are high risk candidate for surgery. Conservative management of acalculus cholecystitis appears to be prudent approach in view of high risk for any surgical procedure in critically ill patients who are in early phase of acute acalculus cholecystitis and have not developed any perforation of gangrene. Acute acalculus cholecystitis can be managed conservatively with fasting, nasogastric tube insertion and gastric decompression, antibiotics and supportive measures in form of correction of electrolyte and acid-base imbalance.⁽³⁾

In patients who are critically ill and unfit for surgery and there is no gangrene of gall bladder and not responding to conservative treatment, such patients are often treated with percutaneous transhepatic cholecystostomy with catheter

drainage of gall bladder. It is known to help in resolution of acute acalculus cholecystitis.⁽⁴⁾

Balmadrid B et al suggested that intravenous antibiotic treatment is first line of management in a case of acute acalculus cholecystitis.⁽⁵⁾ Jessica Y. Ng described a case of acute acalculus cholecystitis managed with intravenous antibiotic alone in spite of recurrent episodes requiring readmission.⁽⁶⁾ Thambidorai CR et al studied 14 cases of acute acalculus cholecystitis caused by enteric fever, all of them responded to conservative treatment without requiring any surgical intervention.⁽⁷⁾

Both our patients were hemodynamically stable patients. They were managed with IV antibiotics along with low molecular weight heparin and T. Ecosprin 75 mg once a day as a part of deep vein thrombosis prophylaxis. Both responded to conservative treatment. After a long term follow up of more than 5 years they remained asymptomatic without any recurrence of symptoms.

Antibiotics treatment has definite role in treatment of acute calculus cholecystitis. Our patients were given antibiotics as per standard of care. Ischemia of gall bladder is very well known etiopathology of acute acalculus cholecystitis. Low molecular weight heparin and ecosprin given for short term as a part of DVT prophylaxis may have helped in this case in resolution of ischaemia and in successful outcome of conservative treatment of acute acalculus cholecystitis.

After an ischemic episode of gall bladder subsides – it may develop collateral channel from gall bladder bed as well as from adhesion developed with other abdominal structures such as omentum and duodenum. This may help prevent further episodes of ischaemia of gall bladder. Revascularization of ischaemic gall bladder may have been possible mechanism because of which both patients have remained asymptomatic for more than 4 years duration.

Conclusion

Conservative treatment of acute acalculus cholecystitis in early phase is possible with intravenous antibiotic. Low molecular weight heparin and acetyl salicylic acid may help in improving outcomes. In subset of patients with acute acalculus cholecystitis who are managed conservatively, surgery can be avoided in long term as they may not develop recurrent episode.

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