Laparoscopic cholecystectomy in a pregnant lady with systemic lupus erythematosus

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It is estimated that 1-3% of pregnant women undergo surgical procedures unrelated to their pregnancy[1] with symptomatic gallstones seen in 4-12% of all pregnancies.[1,2] A spontaneous abortion risk of 12% is associated with non-operative management of symptomatic cholelithiasis in the first trimester.[2] This risk of pregnancy loss is further compounded in a patient with systemic lupus erythematosis (SLE) in whom there is an inherent risk of pregnancy loss.[3] Most of the reported cases of acute cholecystitis in SLE patients is acalculous in nature.[4] A SLE patient who is receiving immunosuppressive therapy has an increased chance of complicated course of acute cholecystitis if managed conservatively and that of wound complications if subjected to open cholecystectomy. These risks could be significantly reduced by conducting a safe laparoscopic cholecystectomy (LC) as in our patient.

A 36-year-old Omani female, gravida 6 para 4 (1 abortion), 26 weeks pregnant, presented with acute right hypochondriac pain of 2 days duration. The pain was associated with nausea, vomiting and low-grade fever. Four years earlier, she was investigated for complaints of multiple joint pains, puffiness of face, erythematous skin lesions, Raynaud's phenomenon and intermittent thrombocytopenia. Laboratory data revealed positive anti-nuclear antibodies (1:640), with low complements C3 and C4, positive ribonucleoprotein antibodies and negative antiphospholipid antibodies. She was diagnosed to have SLE. Further systemic investigations revealed normal pulmonary, cardiac and renal functions. Her condition improved on immunosuppressive therapy and at the time of presentation she was on prednisolone 10 mg once a day, azathioprine 100 mg bid, colchicine 1 mg once a day, aspirin 75 mg and ranitidine 150 mg bid. The rheumatologist advised the patient to discontinue Azathioprine and colchicine during the first trimester and restart during the second trimester. During this admission for acute abdomen she was unwell, febrile (temperature 38^0C), slightly pale but not jaundiced. There was marked tenderness and guarding in the right hypochondriac region. Murphy's sign was positive. The uterus was palpable, approximately 26 weeks size, but the rest of the abdomen was normal. Her hemoglobin was 10.2g/dl, white blood cell count (WBC) $2x10^9$/l and liver function tests were within normal limits.

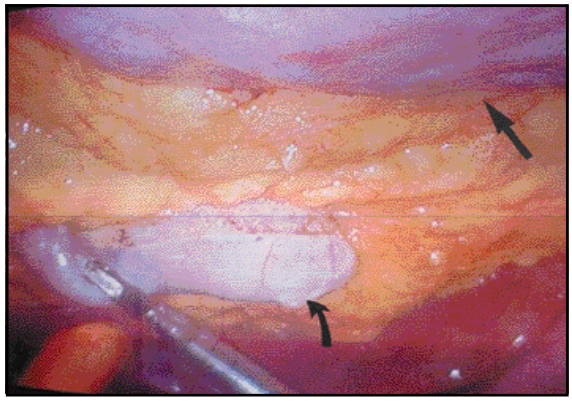

Figure 1 - Laparoscopic view of pregnant uterus (curved arrow) and the excised gall bladder (straight arrow) on completion of cholecystectomy.

Ultrasound examination (US) revealed an edematous, thick-walled gallbladder with a solitary gallstone (1 cm in size), a normal-size common bile duct and confirmed fetal well-being. She was initially managed conservatively with intravenous fluids and antibiotics (cefuroxime 750mg and metronidazole 500mg 8th hourly), in addition to her regular medications. However, her condition did not improve after 48 hours of therapy. After obstetric consultation, it was decided to proceed to LC, having obtained an informed consent. On laparoscopy, the gallbladder was found to be inflamed with the fundus wrapped by omental adhesions. Laparoscopic cholecystectomy was carried out successfully with minimal bleeding (**Figure 1**). The postoperative course was uneventful, and the patient was discharged 2 days later with her regular drugs and was followed up in the outpatient clinic. At 38 weeks of gestation she had a normal delivery and delivered a healthy male baby weighing 3.2 kg. The child was followed up for 3 years and is growing-well with normal milestones.

In pregnant patients with SLE there are potential obstetrical problems related to the disease including the risk of pregnancy loss, preterm delivery, pregnancy induced hypertension and fetal growth impairment.[3] Generally, the median rate of pregnancy loss is 30% which is particularly seen in patients with antiphospholipid antibodies.[3] Acute cholecystitis in pregnant patients with SLE may enhance the obstetrical risks. Cholecystitis in patients with SLE is often acalculous and results from vasculitis, serositis or hemorrhage,[4] rarely, it could be calculous as in our patient. In these patients, urgent cholecystectomy or cholecystostomy is advocated particularly when they are critically ill or do not respond to conservative management[2] like in our patient.

When LC was first introduced, pregnancy was cited as an absolute or relative contraindication to the technique. However, with the experience gained in laparoscopic surgery over the years, the complication rates following LC during pregnancy compare favorably with those of open cholecystectomy.[2]

Some of the distinct advantages of LC in pregnant patients include the reduction in the incidence of wound complications (such as wound infection and dehiscence) from large incisions, reduced need of post-operative narcotics for pain relief, reduced incidence of complications of immobilization such as deep vein thrombosis and pulmonary embolism and speedy recovery.[2] Natural birth without a cesarean section can be facilitated especially in patients who require cholecystectomy later in their pregnancy.[2] This was of particular importance in our SLE patient who was on immunosuppressive therapy. Patients who are on immunosuppressive drugs are at additional risk of wound complications following cholecystectomy, which is reduced by the laparoscopic approach.[5] In addition to the above advantages of laparoscopic approach, patients on immunosuppressive therapy have the further benefits of less delay to resumption of preoperative oral immunotherapy and lesser incidence of immunotherapy related wound complications.[5]

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