

Laparoscopic Cholecystectomy In Patients With Previous Renal Transplantation

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Abstracts: Objective: To analyse and present our experience of laparoscopic cholecystectomy in patients with previous renal transplantation. Materials and Methods: Records of patients who have undergone laparoscopic cholecystectomy after kidney transplantation from January, 2010 to December, 2010 were reviewed. Data, in form of, demographics, medications used, indication of transplantation, manifestation of gallstones, operative findings, duration of hospitalisation and postoperative complications were obtained and analyzed. Results: Ten patients have undergone laparoscopic cholecystectomy. All patients were admitted on the day of surgery. Immunosuppression regimen was not modified during hospitalisation. Indications of cholecystectomy were biliary colic (4), acute cholecystitis (4) and asymptomatic gallstones (2). Laparoscopic cholecystectomy was uneventful in all cases. Postoperative complications were nausea and vomiting in two patients and port site infection in one patient. Conclusion: Laparoscopic cholecystectomy is safe and feasible in patients who have undergone renal transplantation. [Sutariya V et al NJIRM 2012; 3(3) : 60-62]

Key words: Gallstones, Laparoscopic cholecystectomy, Renal Transplantation.

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Introduction: We, at our institute, advocate prophylactic laparoscopic cholecystectomy when gallstones are detected during ultrasonographic examination for renal transplant waiting patients. Such an approach is justified in view of high incidence of complications including renal allograft loss when cholecystectomy is performed in transplanted patients with calculus cholecystitis¹. Still, many renal transplant recipients are identified with multiple mobile gall stones. Main reason behind this is that there is persistently increased risk of gallstone formation in transplant recipients because of reasons like immunosuppressive drugs, obesity, hyperlipidemia and diabetes mellitus². According to previous literature, laparoscopic cholecystectomy, when performed in this group of patients, carries high risk of morbidity and even mortality in some cases¹. Here, we share our experience of laparoscopic cholecystectomy for complicated gallstone disease in renal transplant recipients.

Material And Methods : After taking permission of ethical committee, the records of two hundred fifty patients who had undergone kidney transplantation in the year 2010 were reviewed. A total ten renal allograft recipients underwent laparoscopic cholecystectomy after kidney transplantation.

Among these, six were male and four were female with a mean age of 45.3 years (range – 30 to 65 years). All patients were receiving cyclosporine, azathioprine and steroids as part of immunosuppression regimen. Indications for laparoscopic cholecystectomy were biliary colic (4), acute cholecystitis (4) and asymptomatic multiple gallstones (2). All patients were having normal renal function (mean serum creatinine-1.21 mg/dl with a range of 0.8 to 1.5 mg/dl) at the time of cholecystectomy. Laparoscopic cholecystectomy was performed using standard four trocar technique³. Intraabdominal pressure was maintained at 12 mm hg.

Result: Surgery was uneventful in all cases. Patients were allowed to take liquid diet same evening and switched over to normal diet gradually. Immunosuppression regimen was not changed during the period of hospitalisation so as not to have any risk of allograft rejection. The mean interval time between transplantation and cholecystectomy was 2.1 years (range 1.5 to 3 years). Mean operative time was 55 minutes (range 40 to 90 minutes). Drain was not kept in any of ten patients. Conversion to open cholecystectomy was not required. Mean hospital stay was 1.6 days with a range of 1 to 4 days. Two patients experienced

nausea and vomiting in immediate postoperative period. One patient developed infection at epigastric port from gallbladder is removed but he was successfully treated with oral antibiotic treatment and daily dressing. No other significant postoperative complications were noticed.

Discussion: Although the true prevalence of gallstones in transplant population is not known, this rate is somewhat higher than normal population⁴. Although the exact mechanism of increased incidence of gallstone formation after transplantation is not known, main risk factor is considered to be use of immunosuppressive drugs mainly cyclosporine. The most prominent theory is that cyclosporine induces cholestasis leading to gallstone formation. But others have suggested that increased excretion of cyclosporine in to bile making it more lithogenic⁵.

In the general population, presence of asymptomatic gallstones is not considered as an indication of cholecystectomy. Immunosuppressed transplant recipients may be an exception because asymptomatic gallstones can cause considerable morbidity in this group of patients. In addition, most common presentation of cholelithiasis in transplant recipients is cholecystitis. Further, immunosuppression may mask signs of inflammation and cause delay in diagnosis of cholecystitis⁶. Complications of gallstones are associated with high morbidity and mortality in solid organ transplant recipients. The morbidity of laparoscopic cholecystectomy when used in uncomplicated cholecystitis is low. However, when the procedure is used to treat complicated cholecystitis especially in immunosuppressed patients, morbidity and mortality are elevated. Several studies have reported lower results such as increased operative time, increased estimated blood loss and prolonged hospitalisation. Concomitant diseases like diabetes may affect complication rate. These are the reasons why most transplant centres recommend laparoscopic cholecystectomy when diagnosis of gallstones is established.

It is still controversial to subject such patients to prophylactic cholecystectomy. Review of previous literature reveals reports of laparoscopic

cholecystectomy being performed in both before and after kidney transplantation^{1, 7}. There is one report of two cases of laparoscopic cholecystectomy performed simultaneously with kidney transplantation⁸. However, some authors maintain that routine prophylactic cholecystectomy is not justified because only a small number of patients with asymptomatic gallstones develop symptoms after transplantation^{9,10}.

Laparoscopic cholecystectomy is now the gold standard treatment for gallbladder disease. Its minimally invasive nature is more appropriate than the conventional method for transplant patients, because of its low morbidity rate¹¹. It offers significant advantages over conventional cholecystectomy with regard to postoperative morbidity and convalescence, shorter period of hospital stay and early resumption to oral immunosuppression than after conventional cholecystectomy.

A policy of pretransplantation screening using an ultrasound of gallbladder with prophylactic cholecystectomy is being performed at our institute for all renal transplant candidates. Still, it is important to recognise that, in spite of careful pretransplantation screening, there is persistently increased risk of gall stone formation in patients receiving cyclosporine. All our patients were on cyclosporine. Therefore, we believe that all renal transplant recipients should be screened for presence of gallstones and laparoscopic cholecystectomy should be performed for symptomatic as well as asymptomatic gall stones.

Conclusion: Laparoscopic cholecystectomy is safe and feasible in patients who have undergone renal transplantation.

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