Original Article

Lymphocele incidence following Renal Transplantation our experience in sims/services Hospital Lahore

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ABSTRACT

Objective: To determine the incidence of lymphocele in patients who under went renal transplantation, as well as potential factors responsible or associated to its development. **Patients and Methods:** All records of 25 patients who were operated for renal transplant in SIMS/SHL between March 2006 to December 2007 were reviewed for lymphocele. The surgical technique was the standard one. All lymphatic vessels were either ligated or diathermized. Baseline post operative ultrasound after one week done or whenever indicated for lymphocele. 10% povidone iodine instilated in case of lymphocele. Patients were followed for an average of six months with history, physical examination and ultrasound on each visit. **Results:** 25 patients (20 male and 5 female) have received renal allograft from live donors. There was 1(4%) instance of lymphocele; encountered at two weeks after renal transplantation. **Conclusion:** Careful ligation of lymphatic vessels both during graft preparation and during implantation can significantly contribute to reducing incidence of lymphocele following renal transplantation. Instillation of 10% povidone iodine in the lymphpcele can cure and prevent its recurrence. **Keywords**: Renal Transplantation, lymphocele incidence, povidone iodine

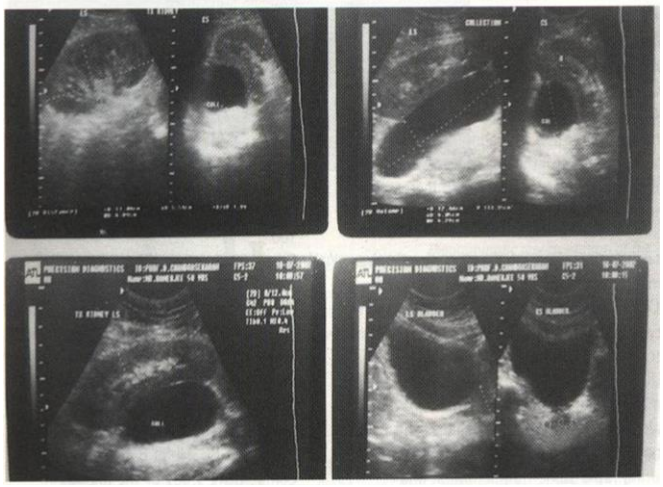
INTRODUCTION:

Lymphocele is the fluid collection most frequently found following renal transplantation [1]. Lymphocele is a well known surgical complication of renal transplantation. Its incidence has been reported to vary between 0.6% to 20 % [1,2] . The risk of developing a lymphocele is associated to previous episode of acute rejection, incomplete ligation of lymphatic vessels in the graft, high doses of steroids and extensive perivascular dissection in the recipient[3]. Most of the time collection is small and remains subclinical and resolves spontaneously [1,3]. However, symptomatic cases may lead to serious complications such as compression of graft vessels, bowel obstruction, infection, ipsilateral lower limb edema and ureteral obstruction with deterioration of graft function [4]. Ultrasound is the key to diagnosis but other radiological procedures such as isotope scanning, CT scan, MRI, might be necessary in complicated cases [5] Therapeutic options include; i.e. conservative, percutaneous aspiration followed by infusion of a sclerosing agent, or internal (peritoneal) drainage, by both laparoscopic or open marsupilization[5].

PATIENTS AND METHODS:

25 renal transplantation procedures have been performed at the Services Institute of Medical Science/SERVICES Hospital Lahore. Out of these there were 20 male and 5 female patients with age range between 17-56 years. The allograft source was live related donor in all patients. The surgical technique was the standard one, where the renal graft was placed in the iliac fossa and its vessels were anastomosed to the iliac vessels and the ureter was implanted into bladder by modified Lich technique. All lymphatic vessels encountered during dissection of iliac vessels were either ligated or diathermized. No stent was used in the ureteric anastomosis. Patients received an immunosuppressive regimen that consisted of cyclosporine, corticosteroids and mycofenolate mofetil or azathioprine. Base line ultra sound examination was performed during 1st few post operative days and were repeated when ever indicated. For small asymptomatic collections, the plan was to

observe and regularly follow for change of size. Large and symptomatic collections were to be drained by percutaneous aspiration only or by instillation of 5ml of 10% povidone iodine twice daily through a fistulous tract. Patients were followed for a period of six months by history, physical examination and ultrasound to assess for lymphocele.



A series of Ultrasonograms showing lymphocele

RESULTS:

A total of 25 patients with live donor kidney transplantation were followed up in SIMS/Services hospital Lahore over a period from March 2006 to December 2007. The causes of renal failure were hypertensive nephropathy 10 (40%), chronic Glomerulonephritis 6 (24%) calculus Renal Failure 5 (20%) and Diabetic Nephropathy 4 (16%). Age range of Donor was 20-55 years with mean of 33.12 while age range of recipients was 17-56 years with mean of 30.60 years respectively. Donor Recipient male to female ratio was donor 18 male (72%) , 07 female (28%), and recipient,20 male (80%)and 05 female (20%). Lymphocele was diagnosed in 1(4%) at 2 weeks after renal transplantation. Patient presented with a small palpable painless supra pubic swelling along with ipsilateral lower limb edema. No symptoms and signs of venous or ureteric compression noted. Diagnosis was made on history, clinical examination and ultrasound scanning. Percutaneous aspiration was performed. Collected material was sent for biochemical and microbiological analysis. It proved to be sterile and it had biochemical characteristics of lymph. Later on this swelling ended up with cutaneous fistula formation. Povidone iodine (5ml of 10%) was instillated through the fistulous tract twice a day. The lymph discharge became insignificant within seven days. There was no graft loss due to lymphocele in this study. During follow up there was no recurrence of lymphocele noted in this patient.

DISCUSSION:

The development of lymphocele following renal transplantation is a reality that urologists who develop such activity must live with. The use of ultrasonography increased the index of detection for these fluid collections, though the majority of them have small size, and resolve spontaneously [2].While the etiopathogeny of its formation remains unclear, many risk factors for its formation have already been postulated. It is believed that extensive perivascular dissection along the route of iliac vessels, episodes of acute rejection, cadaveric versus live donors, high doses of corticotherpay, retransplantation, and polycystic disease in the recipients, are factors that contribute to the development of fluid collections [9].

The reported incidence of lymphocele in the literature ranges from 0.6% to 20% [1,2,3,11]. The low incidence (4%) of lymphocele in our study, results from the careful ligation of lymphatic vessels in the graft, extending from the hilum and along the ureter. More over the recipients lymphatic vessels are carefully ligated along the area where the vascular anastomoses is subsequent performed. Although lymphocele collection is harmless and asymptomatic in many cases, it can seriously affect renal graft function and necessitates intervention. In the literature there are many reports of primary or recurrent lymphocele in kidney transplant recipient, being managed by povidone iodine irrigation with high success rate [4,5]. Teruel etal [7] were the 1st to describe this procedure. In there hands two patients with lymphocele were treated successfully without recurrence. Other authors reported success rate from 89% to 100 % [6,7,13].

The incidence of lymphocele was not influenced by the recipient gender, age, graft source. Furthermore, the lymphocele collection in our study has a simple swelling followed by cutaneous fistula formation, there is no manifestation of venous or ureteric compression. Sclerosing of lymphocele by 10% povidone iodine solution was used in our patient. There was no adverse reaction or complication associated with povidone iodine instillation, there is no morbidity; povidone iodine has anti bacterial action, is a local sclerosant, is non toxic or irritant and is water

soluble. It is simple, safe, and cost effective method[4,5,7].

CONCLUSION:

Lymphocytes are common complications following renal transplantation, and can lead to an increase in morbidity for this procedure. The use of a standardized dissection technique with rigorous ligation of the lymphatic vessels in graft and recipient decrease its occurrence, regardless of the presence of predisposing factors to its formation. Povidone iodine instillation can cure and prevent lymphocele recurrence after renal transplantation with no morbidity.

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