Mechanical Thromboprophylaxis is Sufficient to Prevent Lower Extremity Deep Vein Thrombosis after Kidney Transplantation

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Purpose: It is well known that lower extremity (LE) deep vein thrombosis (DVT) is one of the most potentially devastating results in patients undergoing major surgical procedures. But a few data are available on the incidence and prevention of LE DVT after kidney transplantation (KT). Most studies were designed retrospectively and came from Western countries. The aim of our study was to evaluate the incidence according to preventive methods of LE DVT within 1 month after KT in Korean.

Methods: 187 consecutive patients were included during the period December 2009 to October 2011. These KT recipients were divided into two groups according to DVT prophylaxis. One group used graduated elastic stocking (GES) (n=93), the other group used pneumatic compression device (PCD) (N=94). In this study the frequency of LE DVT during the first 1 month after KT was evaluated using serial duplex ultrasound. The duplex ultrasound was performed on postoperative days (POD) 7, 14, 28. All patients were screened before KT for a hypercoagulable state by measuring the lupus anticoagulant, antiphospholipid antibody, hyperhomocysteinemia, protein C deficiency, protein S deficiency, antithrombin-III deficiency, Factor Va Leiden mutation and prothrombin gene 20210A mutation. At the end of surgery, closed suction drains were left in place until the drainage was less than 50 ml/day for two consecutive days.

Results: LE DVT occurred in 4 patients (2.1%) during the first 4 weeks after KT. All DVT developed in GES group. None occurred in PCD group. In only one of the four was there any clinical evidence of a DVT and three patients were asymptomatic and the diagnoses were made during routine DU. All DVTs occurred on the side of the graft. The DVT developed a median time of 14 days (range 1-28 days) after kidney transplantation. Interestingly, Factor Va Leiden mutation and prothrombin gene 20210A mutation were not found in 187 consecutive patients recruited for the study and tested for genetic thrombophilia.

Conclusion: The total incidence of DVT in this study was relatively lower than that of Western population and PCD could be reduced to some extent of the incidence of LE DVT compared with GES (p=0.058). And we could not found Factor Va Leiden mutation and prothrombin gene 20210A mutation in our study populations. These findings suggest that these inherited thrombophilic risk factors have to be considered as the main cause of a different incidence of DVT between different races.

Single Center Experience of Time Frame for Drain Removal after Kidney Transplantation

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Background: Lymphocele is a common surgical complication after renal transplantation. The incidence of lymphocele ranges from 0.6% to 18%. Management of lymphoceles after kidney transplantation is highly variable. The aim of this study was to evaluate and compare the different approaches of lymphocele management during kidney transplant recipients. Primary outcome was the rate of recurrence. Secondary outcomes were the rate of conversion from ultrasonic guided aspiration or without sclerotherapy to open surgery, length of drainage, hospital stay, and complication rates. Moreover, we determined risk factors and prognosis of complicated lymphocele in the era of modern immunosuppression.

Patients and methods: We retrospectively reviewed 193 renal transplants from January 2010 to June 2011, excluding patients who received sirolimus. A complicated lymphocele was defined by the requirement for ultrasonic guided aspiration or surgical procedure for cure. The surgical technique was the standard one. All lymphatic vessels were either ligated or diathermed. Baseline ultrasound examination was performed during 1st few post operative days and were repeated whenever indicated. Immunosuppressive therapy was prednisone plus cyclosporine A and mycophenolate mofetil.

Results: A lymphocele located in renal graft area was diagnosed by ultrasonography in 23 out of 193 renal transplant patients (11%). All lymphoceles with volume exceeding 150 mL were clinically symptomatic. The drain was removed within 10 days postoperatively in 155 out of 193 (80.3%). On the other hand, the drain was removed within 5 days in 68 out of 193 (35%), while it was removed from 10 to 50 days in 38 out of 193 (19.68%). Thirteen patients with asymptomatic lymphocele (mean volume 50 mL) were monitored to have resolution after a mean of 5 weeks. Ten patients with complicated lymphocele required initial treatment by repeated needle aspirations. Seven out of them showed success and resolution of the lymphocele after sclerotherapy with povidone-iodine, and/or ethanol. In two cases, internal marsupialization was performed and in one case external drainage was necessary due to abscess formation. Punctures, drainage, and sclerotherapy were not effective in patients with lymphoceles (>500 mL).

Conclusions: Initial percutaneous drainage with or without sclerotherapy was an effective method of treatment. Laparoscopic fenestration of a symptomatic lymphocele was associated with the lowest risk of lymphocele recurrence. However, the evidence to support a recommendation for laparoscopic surgery as first line treatment is weak and highlights the need for a multicenter prospective cohort study to examine the benefits of incorporating initial simple aspiration and or sclerotherapy for the management of lymphocele after kidney transplantation.