

Frequency of Surgical Complications in Diabetic Patients after Kidney Transplantation

Authors : Hakan Duger, Alparslan Ersoy, Canan Ersoy

Abstract : The improvement of surgical techniques in recent years has reduced the frequency of postoperative complications in kidney transplant recipients. Novel immunosuppressive agents have reduced rates of graft loss due to acute rejection to less than 1%. However, surgical complications may still lead graft loss and morbidity in recipients. Because of potent immunosuppression, impaired wound healing and complications are frequent after transplantation. We compared the frequency of post-operative surgical complications in diabetic and non-diabetic patients after kidney transplantation. **Materials and Methods:** This retrospective study conducted in consecutive patients (213 females, 285 males, median age 39 years) who underwent kidney transplant surgery at our center between December 2005 and October 2015. The patients were divided into two groups: diabetics (46 ± 10 year, 26 males, 16 females) and non-diabetics (39 ± 12 year, 259 males, 197 females). Characteristics of both groups were obtained from medical records. **Results:** We performed 225 living and 273 deceased donor transplantations. Renal replacement type was hemodialysis in 60.8%, peritoneal dialysis in 17.3% and preemptive in 12%. The mean body mass indexes of the recipients were 24 ± 4.6 kg/m², donor age was 48.6 ± 14.3 years, cold ischemic time was 11.3 ± 6.1 hours, surgery time was 4.9 ± 1.2 hours, and recovery time was 54 ± 31 min. The mean hospitalization duration was 19.1 ± 13.5 days. The frequency of postoperative surgical complications was 43.8%. There was no significant difference between the ratios of post-operative surgical complications in non-diabetic (43.5%) and diabetic (47.4%) groups ($p=0.648$). Post-operative surgical complications were lymphocele (24.6% vs. 23.7%), delayed wound healing (13.2% vs. 7.6%), hematoma (7.8% vs. 15.8%), urinary leak (4.6% vs. 5.3%), hemorrhage (5.1% vs. 0%), hydronephrosis (2.2% vs. 0%), renal artery thrombosis (1.5% vs. 0%), renal vein thrombosis (1% vs. 2.6%), urinoma (0.7% vs. 0%), urinary obstruction (0.5% vs. 0%), ureteral stenosis (0.5% vs. 0%) and ureteral reflux (0.2% vs. 0%) in non-diabetic and diabetic groups, respectively ($p > 0.05$). Mean serum creatinine levels in non-diabetics and diabetics were 1.43 ± 0.81 and 1.61 ± 0.96 mg/dL at 1st month ($p=0.198$). At the 6th month, the mean graft and patient survival times in patients with post-operative surgical complications were significantly lower than in those who did not (162.9 ± 3.4 vs. 175.6 ± 1.5 days, $p=0.008$, and 171 ± 2.9 vs. 176.1 ± 1.6 days, $p=0.047$, respectively). However, patient survival durations of non-diabetic (173 ± 27) and diabetic (177 ± 13 day) groups were comparable ($p=0.396$). **Conclusion:** As a result, we concluded that surgical complications such as lymphocele and delayed wound healing were common and that frequency of these complications in diabetic recipients did not differ from non-diabetic one. All persons involved in the postoperative care of kidney transplant recipients be aware of the potential surgical complications for rapid diagnosis and treatment.

Keywords : kidney transplantation, diabetes mellitus, surgery, complication

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