

Introduction

Solid organ transplant is the mainstay of treatment for several end-stage organ diseases. The number of patients who will benefit from it is expected to increase due to improvement in the distribution system for organs from donors and better peri- and post-operative management of these patients. Hence, an increasing number of these patients are becoming reasonable candidates for subsequent, elective surgeries such as spine surgery. Here, we aim to summarize clinical outcomes of spine surgery in solid organ recipients, such as readmission rate, infectious complications, and mortality, to facilitate clinical decision-making processes for this specific cohort.

Methods

Single-center, retrospective data review from 2010 to 2016 yielded a total of 4968 patients who underwent spine surgery. Amongst those, 28 patients had a previous history of solid organ transplantation. Patients from the database were propensity-matched for baseline characteristics at 1:2 ratio, which yielded 56 matched-patients. Clinical outcomes of (A)28 patients with organ transplantation and (B)56 matched-patients were compared and statistically analyzed. All reported p values are 2-sided and p values <.05 were regarded as statistically significant.

Results

Baseline characteristics were similar between the two groups with no statistically significant difference. However, the organ-recipient group resulted in longer hospital stays ((A) 7.2 days versus (B) 4.3 days, p < 0.01), higher rates of 30-day readmission ((A) 14.3% versus (B) 7.1%, p = 0.04), 90-day medical complication ((A) 42.8% versus (B) 17.9%, p = 0.02), one-year infectious complication ((A) 14.3% versus (B) 3.6%, p = 0.09), and one-year reoperation ((A) 14.3% versus (B) 3.6%, p = 0.09) as compared with the control matched-cohort.

Conclusions

Spinal surgery after solid organ transplantation resulted in substantially increased complication rates when compared with the matched-control group. Judicious patient selection, meticulous perioperative care, and thorough informed consent of potential complications would be imperative when performing spine surgery on this cohort.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the importance of understanding risks and benefits of spine surgery on patients with previous solid organ transplantation.