

Abstract

OBJECT: Organ transplantation for renal, liver, cardiac, and pulmonary failure has become more common in recent years, and patients are living longer as a result of improved organ preservation methods, immunosuppressive regimens, and general posttransplant care. Some of these patients undergo spine fusion surgery following organ transplantation, and there is little available information concerning outcomes. The authors report on their experience with and the outcomes of spine fusion in this rare and unique immunosuppressed patient group. **METHODS:** Using the Current Procedural Terminology and ICD-9 codes for solid organ transplants, bone marrow transplantations (BMTs), and spine fusion surgeries, the authors searched their patient database between 1997 and 2008. Data points of interest included primary diagnosis, type of organ transplant, immunosuppressant drug therapy, complications from spine surgery, and radiographic analysis of spine fusion. Spine fusion was assessed with CT or radiography at the latest follow-up. **RESULTS:** The database search results revealed 5999 patients who underwent heart, lung, liver, kidney, pancreas, intestine, or bone marrow transplant between 1997 and 2008. Eighteen of the 5999 patients underwent a spine fusion surgery while receiving immunosuppressive therapy. Organ transplants included kidney, liver, heart, pancreas, and allogenic BMT. There were 3 deaths unrelated to spine fusion within 1 year of the surgery and 1 death immediately after spine surgery. Graft-versus-host disease developed in 1 patient when prednisone was stopped prior to the spine surgery. Thirteen patients underwent follow-up radiographic imaging at an average of 25 months after spine surgery; 12 demonstrated radiographic fusion. **CONCLUSIONS:** The results suggest that spine fusion rates are adequate despite immunosuppressive therapy in patients undergoing spinal fusion after transplant procedures. The data also illustrate the high morbidity and mortality rates found in the organ transplant patient population.