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## **Safety and Reproducibility of Total Cervical Disc Replacement in an Ambulatory Surgery Center.**

### **Introduction**

The evolution of minimally invasive spine surgery has pushed many inpatient procedures to the outpatient ambulatory surgical center (ASC) setting. The potential for shorter recovery times and decreased infection rates are major benefits of minimally invasive spine surgery. We report our early results with the total cervical disc replacement (TDR) procedure performed in the outpatient setting.

### **Methods**

A retrospective chart review was performed to look at 18 consecutive patients with regards to demographics, length of stay, comorbidities, and 30 day readmission rates.

### **Results**

All surgeries were performed by the senior author. 18 consecutive patients underwent a TDR in an outpatient ASC setting. 12 patients were male and 6 patients were female. The average age was 45.6 (33-57). 16 patients had a one level TDR and 2 had a two level TDR. The average BMI was 30.0 (23.0-43.1). 12 patients had private insurance and 6 patients had workman's

compensation/liability claims. The average length of stay was 93.9 minutes (range 54-133). No patient required a blood transfusion or transfer to a hospital. Comorbidities include hypertension (8), GERD (5), ex-smoker (5), hypothyroid (4), smoker (2). 7 patients had one of the following as their sole comorbidity: leukemia, history of esophageal cancer, history of heart murmur, history of hepatitis C infection, glaucoma, arthritis, diabetes. The highest ASA score was 3. No patient had to be readmitted within 30 days of the procedure. No infections were noted.

### **Discussion**

Results of this single-surgeon single-center study demonstrate safety and reproducibility of TDR in the outpatient ASC setting in well-selected patients. This presents a significant opportunity for patients and payers to benefit from decreased infection rates, quicker recovery and achieve cost benefits. Limited data exist on outpatient minimally invasive TDR in ASCs. Previous research has explored the safety and reproducibility of TDR in both hospital and ASC outpatient settings. Further research performed in a prospective multi-center study is needed to validate these early findings.