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PREVALENCE, COMORBIDITIES AND RISK OF PERIOPERATIVE COMPLICATIONS IN HIV-POSITIVE PATIENTS UNDERGOING CERVICAL SPINE SURGERY

Introduction/Aim

Highly active antiretroviral medications have qualitatively altered the natural history of human immunodeficiency virus (HIV), thus increasing the number of HIV positive patients seeking treatment for chronic degenerative conditions. The purpose of our study was to assess incidence, risk of perioperative complications and hospital outcomes in HIV patients undergoing degenerative cervical spine surgery.

Materials and Methods

The Nationwide Inpatient Sample was examined from 2002 to 2011. Hospitalizations were identified using ICD-9-CM procedural codes for cervical spine surgery and diagnoses codes for degenerative conditions of the cervical spine as well as HIV. Patient demographic data, comorbidities, acute complications and hospitalization outcomes were determined for each cohort. Statistical analysis was conducted to evaluate associations between HIV and complications.

Results

In total 1,602,129 patients underwent degenerative cervical spine surgery, of which 3,700 (0.23%) had HIV. The prevalence of HIV patients undergoing surgery increased from 0.19% in 2002 to 0.33% percent in 2011 ($p < 0.001$). Patients with HIV were younger (48.6 vs. 53.4, $p<0.001$) and more likely to be male. HIV patients had significantly greater odds of having chronic pulmonary disease (odds ratio (OR)=1.76), liver disease (OR=11.28), and drug abuse (OR=10.08). Unadjusted analysis did not reveal increased rate of acute complications among HIV-positive patients compared to negative controls (3.8% vs. 3.7%, $p=0.62$). Multivariate analysis did not identify HIV as a significant independent risk factor for complication (OR=1.04, $p = 0.84$). HIV was associated with a 1.5 day increased length of stay as well as 1.29 fold increase in median costs compared to controls ($14,551 vs. 18,846, $p < 0.001$).

Discussion

The prevalence of HIV patients undergoing degenerative cervical spine surgery has been increasing. A diagnosis of HIV was not associated with an increased risk of perioperative complication among patients undergoing degenerative cervical spine surgery.

Conclusions

While the diagnosis of HIV does not appear to be associated with increased risk of complications in patients undergoing cervical spine surgery for degenerative diagnoses, further clinical studies are needed to evaluate predictors of complications among HIV patients as well as long-term outcomes.