

Opioid Dependency Following Surgery for Degenerative Scoliosis: A National Database Analysis Mayur Sharma MD MCh; Beatrice Ugiliweneza MSPH; Ahmad Alhourani M.D.; Tyler Ball MD; Maxwell Boakye MD [University of Louisville]



Introduction

Opioid epidemic is of prodigious concern throughout the United States.The aim of our study was to identify factors predictive of opioid dependency following surgery for Degenerative Scoliosis (DSc).

Methods

In this retrospective study, data was extracted using national MarketScan database (2000-2016). Opioid dependency was defined as continued opioid use or >10 opioid prescriptions for one year either prior to or 3-15 months following the procedure.The outcomes of interest were discharge disposition, length of stay, complications and health care resource use and costs.

Results

A cohort of 748 patients was identified from the database. Median age was 58years (45-67 years) and 64.7% (n=484) of patients were females. Only 19.4% (n=145) of patients had Elixhauser 3+ comorbidity score. 35.82% (n=268) of patients were identified to have opioid dependency before fusion for DSc and 28.34% (n=212) were identified to have opioid dependency after the surgery. Following surgical fusion for DSc, patients were twice likely to become opioid independent than they were to become dependent (13.77% vs. 6.28%, OR: 2.191, 95% CI: 21.552-3.094; p <0.0001). Prior opioid dependency (RR: 14.841; 95% CI: 9.867, 22.323; p<0.0001) was



Flowchart showing improvement in Opioid dependence following surgery



Conclusions

Surgery for Degenerative Scoliosis was associated with increased likelihood of opioid independency than dependency in the postoperative period. Prior opioid dependency was associated with increased risk of opioid dependency following surgery for DSc. Scatter diagram showing the preoperative and post-operative median overall payments among patients in NDND, NDD, DND and DD groups and the effect of surgery on the overall costs following surgery for DSc.



Bar graph showing opioid dependence prior and post-surgery in patients who underwent surgery for DSc. (NDND: prior nondependent who remains nondependent; NDD: prior nondependent who becomes dependent.; DND: prior dependent who become non-dependent; DD: prior dependent who remain dependent.)

Learning Objectives

By the conclusion of this session, participants should be able to 1) Identify the factors associated with opioid dependency following surgery for degenerative Scoliosis. 2) Describe the impact of surgery on opioid dependency in patients with DSc.

References

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