COMPLICATIONS OF POSTERIOR SPINAL FUSION (PSF) FOR ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS): A SINGLE CENTER REVIEW OF 1000 CONSECUTIVE CASES

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Background
The overall complication rate for AIS surgery was reported to be 6.3% with risk of new neurological deficit of 0.8% and a mortality rate of 0.02%. Risk of superficial and deep wound infection was 0.5% and 0.8% respectively.

Objectives:
To assess the complication associated with the PSF surgery in 1000 AIS patients

Materials and Methods:
A retrospective review of 1000 AIS cases who underwent PSF from 2006 to 2017 in a single centre. All patients underwent correction using pedicle screw constructs.

Results:
There were 13 cases (1.3%) of superficial wound infection and 1 case (0.1%) of deep wound infection. The deep wound infection was successfully treated with early debridement (Implant retained) and antibiotic treatment. There was a case of superior mesenteric artery syndrome following correction of a Lenke 1AR curve with BMI of 16.4. There was 1 case of intra-operative seizure. One patient developed Cushing reflex due to epidural hematoma following medial pedicle screw perforation. One patient experienced intra-operative asystole for 60 seconds due to ondansetron allergy and was successfully resuscitated. There were 3 cases (0.3%) of implant loosening without any revision required. Neurological deficit was recorded in 2 cases (0.2%) of post-operative radiculitis due to medial screw perforation at T12 and L2 and were successfully treated conservatively. There were no paralysis and mortalities in this study. The overall complication rate was 2.5%.

Conclusion:
The incidence of complications following PSF using pedicle screw construct in AIS is 2.5%. In this cohort, we did not encounter any catastrophic complication i.e. paralysis and mortalities.