

ASSESSMENT OF SHOULDER BALANCE IN A SURGICALLY TREATED PATIENTS WITH THORACIC ADOLESCENT IDIOPATHIC SCOLIOSIS : A RADIOLOGICAL AND CLINICAL CORRELATION

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ABSTRACT

Scoliosis is an apparent lateral curvature deformity of the spine that is greater than 10 degree with vertebral rotation. It can be treated conservatively or surgically. Post-operative shoulder imbalance has become one of the major concerns for patients and it may lead to psychological distress in adolescent females. This study was implemented to assess the correlation between radiological and clinical findings of shoulder balance in thoracic adolescent idiopathic scoliosis (AIS) patients treated with posterior spinal instrumentation & fusion (PSIF) surgery. This is a cross sectional study involving 30 subjects. All AIS patients with thoracic component who have been treated surgically in HSIJB and IIUM Medical Centre Kuantan with PSIF from January 2007 until May 2019 were selected in this study. Mode of assessment are radiological and clinical. We assessed the correlation between post-operative radiographic & clinical parameters of shoulder balance. We also compared pre and post-operative radiographic parameters between two groups of shoulder balance and identified the radiological factors related to shoulder balance after PSIF. There was no significant correlation exists between post-operative radiological and clinical parameters. Comparison of mean shows none of the radiographic parameters had statistically significant difference in mean between both posterior shoulder imbalance groups. Results also showed that none of the radiographic factors was related to Postoperative Shoulder Imbalance (PSI). In conclusion, there was no radiographic parameter that has a strong correlation with postoperative shoulder balance. Surgeons should pay more attention to clinical shoulder balance parameters during assessment to prevent this complication among adolescents.