

Abutment Of Descending Thoracic Aorta: Complication Of Thoracic Pedicle Screw In Scoliosis Surgery

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INTRODUCTION:

One of the dreaded complication of spinal instrumentation is vascular injury especially to aorta. The true incidence of vascular complications in spinal instrumentation is unknown due largely to the rarity of the condition and scarce report in the literature. Some authors have reported the incidence of vascular complication from spinal instrumentation as low as 0.1%¹

CASE REPORT:

A 24 years old lady with underlying adolescent idiopathic scoliosis underwent PSIF T6 to L3 in October 2014. 6 months post operation complaining of persistent left lower thoracic pain mainly under the left breast. No aggravating or relieving factor. Examination noted tenderness at below the left nipple area. Other examination are unremarkable. CTA of aorta was done showed malpositioned T6 left pedicle screw abutting the descending thoracic aorta and indenting the posterior wall of esophagus at that level(Figure 1). She was referred to vascular surgery and endovascular stent was attempted but unsuccessful. Patient is plan for removal of screw with the standby of cardiothoracic team on a later date.



DISCUSSIONS:

The rotation of the vertebral bodies in major deformities makes the placement of the screws even more complex. Thus explained the incidence of malposition thoracic pedicle screw reported as high as 25%. In patients with major

scoliosis, the aorta remains extremely close to the vertebral column .Moreover, it has been shown that the aorta is placed more laterally in these patients, thus increasing the risk of vascular injury when misplacing pedicle screws. The contact between pedicle screw and pulsating aorta can result in the long run in the formation of aortic pseudoaneurysm, a complication that can be life-threatening. This explains the necessity of the removal of the hardware when an aortic injury is diagnosed, even if the patient is asymptomatic.²

REFERENCES:

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- 2.S Penstei et al; Endovascular Aortic Injury Repair After Thoracic Pedicle Screw Placement *Orthopaedic & Traumatology:Surgery & Research Sept* 2014;100(5);569-573