Pedicle screw placement complications

Vascular complications, which we rarely encounter during lumbosacral stabilization surgeries, can be life-threatening if they are not treated quickly. These arterial injuries occur during screw insertion. The presentation with the common iliac artery injury during the decortication process in transverse processes with 'Pedicle awl' will be the first case in the literature as far as Koban et al. know.

LUMBOSACRAL DECOMPRESSION AND STABILIZATION SURGERY WAS PERFORMED IN A 57-YEAR-OLD PATIENT WITH L1-S1 SPInal stenosis and scoliosis. After the stabilization process was completed; while decorticating the transverse processes with 'pedicle awl', the tool fell to the paravertebral region and then active arterial hemorrhage was observed on the surgical site. Hemostasis was achieved in the surgical field, but a rapid progressive drop was observed in the patient's blood pressure. The surgery was quickly terminated and the patient was turned to the supine position. Vascular surgeons opened the abdomen with midline laparotomy and approximately 2600 cc hematoma was evacuated from the retroperitoneum. The 5 mm defect in the left common iliac artery was repaired by primary suturing. The patient had no problem in postoperative follow-up and was discharged on the 10th postoperative day.

In these complications that we rarely encounter in lumbosacral stabilization surgeries, perioperative findings should be evaluated well, and rapid intervention should be made in cases where vascular injury is considered. One must remember that every tool used during surgery can be dangerous even in an experienced hand [1].

Failures

Although these screws are effective in providing 3-column stabilization of the spine, revision surgeries are occasionally necessary, particularly for geriatric and osteoporotic populations. Innovative technologies should be tested to ensure continued improvement in revision techniques.

Failures of implanted pedicle screws are not unavoidable complications or sequelae of ongoing degeneration, in a properly performed fusion. Failure to provide adequate stabilization can necessitate additional surgical procedures to achieve spinal fusion [2].

Its associated with risks of hardware failure and pedicle fracture during screw insertion [3] [4]. see pedicle screw misplacement.

1)
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Masferrer R, Gomez CH, Karahalios DG, Sonntag VK. Efficacy of pedicle screw fixation in the treatment of spinal instability and failed back surgery: a 5-year review. J Neurosurg. 1998;89:371–377.
3)
Duncan JD, MacDonald JD. Extraction of broken pedicle screws: technical note. Neurosurgery. 1998;42:1399–1400.
4)

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