

Introduction

The anterior approach to the thoracic and lumbar spine with corpectomy is a recognized treatment option for various thoracolumbar pathologies. The aim of the study was to evaluate the usefulness of retroperitoneal extrapleural approach (twelfth rib approach) in managing different lumbar and thoracolumbar pathologies as well as its advantages and potential complications.

Methods

This prospective study was carried out on consecutive 14 patients who had been operated with retroperitoneal extrapleural approach (twelfth rib approach) for different lumbar and thoracolumbar pathologies. Fusion was assessed by plain X-ray films and CT scan, and the neurological outcome by ASIA impairment scale.

Results

Intraoperative complications had occurred in four cases; peritoneal tear, pleural tear, dural tear and excessive blood loss in one case each. Postoperative complications were reported in four patients. One patient showed neurological deterioration, two cases had wound infection and one patient with a painful scar. The mean operation time was 206 min (range 150–270 min) and the mean volume of blood loss was 535 ml (range 200–1250 ml). Regarding the ASIA impairment scale, nine patients had shown improvement, while five patients remained stationary at the same grade.

Conclusions

retroperitoneal extrapleural approach (twelfth rib approach) is indicated in the surgery of L1, L2, L3, L4 vertebrae, and for the D12-L1, L1-L2, L2-L3 and L3-L4 discs; the lower half of T12 vertebra can also be reached by this approach and anterior screws can be placed without pleural entry. This approach associated with reduced morbidity as chest cavity is not violated and diaphragm is not cut.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) discuss different approaches to thoraco-lumbar junction, 2) identify the indications, technique, and advantages of retroperitoneal-extrapleural approach

References

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