Introduction

The anterior approach to the lumbar spine with corpectomy is a recognized treatment option for unstable burst fractures, vertebral tumors and osteomyelitis.

Methods

This prospective study was carried out on consecutive 30 patients who had been operated for L1 corpectomy using the retroperitoneal extrapleural approach through the twelfth rib. The indications of surgery were traumatic fractures in 12 patients, tumor in 8 patients, infection in 6 patients and osteoporotic fractures in 4 patients. The neurological outcome of our patients was evaluated using ASIA impairment scale and the radiological evaluation was done using plain X-ray films and CT scan.

Results

Intraoperative complications had occurred in six cases; peritoneal tear in three cases, pleural tear, dural tear and excessive blood loss in one case each. Postoperative complications were reported in seven patients. One patient showed neurological deterioration postoperatively due to bone graft dislodgement. Four cases had wound infection; three cases with superficial infection and the fourth had deep infection that required debridement. Two patients showed a postoperative painful scar. The mean operation time was 220 min (range 160–280 min) and the mean volume of blood loss was 600 ml (range 400–1400 ml). Back pain improved in all patients. Regarding the ASIA impairment scale, 20 patients had shown improvement, while 10 patients remained stationary at the same grade.

Conclusions

The retroperitoneal extrapleural approach through the twelfth rib is a feasible approach to perform L1 corpectomy with minimal morbidity. It allows safe and effective decompression reconstruction with the possibility of anterior instrumentation at the same stage preserving the posterior column.

Learning Objectives

to recognize the different lumbar pathologies that can be treated using L1 corpectomy and to understand the steps of retroperitoneal extrapleural approach.

References