Dumbbell-shaped thoracic tumors

Dumbbell-shaped thoracic spinal tumors represent a distinct type of tumor and involve in both the spinal canal and the posterior thoracic cavity. Successful treatment for the tumors depends on gross total resection (GTR) via an open laminectomy and facetectomy or transthoracic transpleural approach.

Li et al retrospectively reviewed two patients with dumbbell-shaped thoracic tumors who underwent minimally invasive resection and unilateral transforaminal thoracic intervertebral fusion (TTIF) through unilateral paraspinal muscle approachwith a spotlight expandable tubular retractor. Clinical data, tumor characteristics, and outcomes were analyzed.

Two patients underwent successful minimally invasive treatment of their spinal neoplasms. There were no procedure-related complications. The efficacy in terms of neurological recovery, pain improvement and operative variables (length of incision, operative duration, blood loss, and hospital stay) was better when compared with prior published studies. Postoperative CT image demonstrated complete resection of dumbbell tumor in the patients. The solid fusion was obtained after 3 months follow-up and there was no failure of internal fixation.

If the medial border of intracanal component of extradural dumbbell tumor is near the midline of canal and the pedicles of adjacent vertebrae to tumor are intact, minimally invasive resection of tumor through unilateral paraspinal muscle approach combined with unilateral TTIF is good choice [1].

1)
Li C, Ye Y, Gu Y, Dong J. Minimally invasive resection of extradural dumbbell tumors of thoracic spine: surgical techniques and literature review. Eur Spine J. 2016 Jul 1. [Epub ahead of print] PubMed PMID: 27371333.