En-Bloc Resection of Thoracic Osteoblastoma

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Disclosures:

- None
Introduction:

- Osteoblastomas are primary bone neoplasms that frequently involve the spine.
- Treatment methodologies include: total radical resection, en-bloc resection, or subtotal curettage with radiation.
- Total excision has been shown to significantly reduce relapse rates.
Methods:

- We describe the case of a 17-year-old male who presented to us with 1 month of lower extremity numbness, unsteady gait, and lower extremity hyperreflexia.
Results:

- An MRI and CT of his thoracic spine demonstrated a large lytic extradural mass at T3-4 involving the right pedicle and posterior elements of T4 and extending into the right T3 foramen.
- There was also associated cord edema and epidural enhancement.
- We obtained a preoperative fluoroscopic guided needle biopsy which returned with osteoblastoma.
Results:

- Using a midline posterior incision, a high-speed drill was used to perform laminectomies at T3 and T4.
- Pedicle screw instrumentation was performed from T1-T6 to ensure that the spinal alignment was maintained.
- We then performed a facetectomy and pediculectomy on the left at T4.
- The ribs on the right at T3 and T4 were exposed and the proximal T4 rib on the rib was cut using an ultrasonic aspirator.
- An ultrasonic aspirator and osteotome were used to bisect the right T4 pedicle anterior to the location of the mass, and this allowed the entire mass and posterior elements to be removed in one piece without dissecting through the hyperemic tumor.
- Post-operatively, the patient’s neurologic status significantly improved.
Discussion:

- Osteoblastoma (OBL) is a benign bone tumor with considerable recurrence potential.
- Patients who undergo curettage followed by radiotherapy have high rates of tumor recurrence.
- Patients who underwent intralesional have much lower rates of recurrence, although the surgical morbidity is higher than simple curettage.
- This case demonstrates a method for en-bloc resection of osteoblastoma, negating the necessity of pre-operative embolization and intra-operative blood loss by not performing intra-lesional dissection.
Summary Points:

- Our case demonstrates a review of one of the surgical options for en-bloc resection of osteoblastoma.
- This technique minimizes intra-tumoral dissection thereby reducing intra-operative blood loss.
- En-bloc resection, when possible, provides improved long-term outcomes in patients with osteoblastoma without the need for adjuvant radiation.
References: