Head and neck region chondrosarcomas are very rare accounting for 1-12% of all chondrosarcomas. Thoracic spine is commonly affected. We here present a rare case of upper cervical spine chondrosarcoma in a pediatric patient.

A 7-year-old boy presented with painless and slow-growing mass in the left posterior cervical region. He had no neurological deficits. Computed tomographic scan showed hypodense, non-enhancing lesion in left posterior cervical region abutting posterior arch of C1. It also contained calcification. Magnetic resonance imaging revealed hypointense lesion on T1- and hyperintense on T2-weighted and STIR images, with slight extension into the neural foramina without widening it (Figure 1). Peripheral nerve sheath tumor was suspected and the patient underwent total resection of the lesion. Left vertebral artery was abutting the lesion anteriorly without encasement. The nodular, grayish to whitish, 3.8 cm x 2.4 cm mass was removed (Figure 2), which contained central cystic space. Histopathological study revealed that it comprised chondrocytes in ill-defined lobules with hyaline matrix. Chondrocytes were hypercellular with rare binucleate chondrocytes with mild nuclear pleomorphism (Figure 3). These findings are suggestive of low-grade (grade I) chondrosarcoma. The patient had no postoperative deficits and regular follow-up was advised considering high recurrence rate.

En-bloc resection remains the choice for chondrosarcomas. Local recurrence is very common.
Adjuvant radiotherapy has a limited role, is applied usually in incomplete resection or for palliation. Chemotherapy is not recommended. Prognosis is good for low-grade with 5-year survival of 90%. Regular radiological follow-up is required to detect any recurrence. Thus, chondrosarcoma should be considered as a differential diagnosis of cervical spine tumors for appropriate management.

References: