Extradural spinal cord tumor

Arise in vertebral body or epidural tissue.

Extradural tumors are usually metastatic and most often arise in the vertebral bodies.

1. metastatic: comprise the majority of ED tumors

a) most are osteolytic (cause bony destruction): see Spinal epidural metastases

Common ones include:

● lymphoma: most cases represent spread of systemic disease (secondary lymphoma); some cases may be primary

● lung cancer

● breast cancer

● prostate cancer

b) metastases that may be osteoblastic:

● in men: prostate Ca is the most common

● in women: breast Ca is the most common

2. primary spinal tumors (very rare)

a) chordomas

b) osteoid osteoma

c) osteoblastoma

d) aneurysmal bone cyst (ABC): an expansile tumor-like osteolytic lesion consisting of a highly vascular honeycomb of blood-filled cavities separated by connective tissue septa, surrounded by a thin cortical bone shell which may expand. Comprise 15% of spine tumors.

Etiology is controversial. May arise from preexisting tumor (including: osteoblastoma, giant cell tumor, fibrous dysplasia, chondrosarcoma) or following acute fracture. In the spine, there is a tendency to involve primarily the posterior elements. Peak incidence is in the second decade of life. Treatment usually consists of intralesional curettage. High recurrence rate (25–50%) if not completely excised

e) chondrosarcoma: a malignant tumor of cartilage. Lobulated tumors with calcified areas

f) osteochondroma (AKA chondroma AKA osteocartilaginous exostosis): benign tumors of bone that arise from mature hyaline cartilage. Most common during adolescence. An enchondroma is a similar tumor arising within the medullary cavity

g) vertebral hemangioma

h) giant cell tumors (GCT) of bone: AKA osteoclastoma

i) giant cell (reparative) granuloma: AKA solid variant of ABC.5 Related to GCT. Occurs primarily in mandible, maxilla, hands and feet, but there are case reports of spine involvement.5,6 Not a true neoplasm—more of a reactive process. Treatment: curettage. Recurrence rate: 22–50%, treated with re-excision

j) brown tumor of hyperparathyroidism

k) osteogenic sarcoma: rare in spine

3. miscellaneous

a) plasmacytoma

b) multiple myeloma

c) unifocal Langerhans cell histiocytosis (LHC), née eosinophilic granuloma: osteolytic defect with progressive vertebral collapse; LHC is one cause of vertebra plana. C-spine is the most commonly affected region. Individual LHCs associated with systemic conditions (Letterer-Siwe or Hand-Schüller-Christian disease) are treated with biopsy and immobilization. Collapse or neurologic deficit from compression may require decompression and/or fusion. Low-dose RTX may also be effective.

d) Ewing’s sarcoma: aggressive malignant tumor with a peak incidence during the second decade of life. Spine mets are more common than primary spine lesions. Treatment is mostly palliative: radical excision followed by RTX (very radiosensitive) and chemotherapy

e) chloroma: focal infiltration of leukemic cells

f) angiolipoma: ≈ 60 cases reported in literature

g) neurofibromas: most are intradural, but some are extradural, usually dilate neural foramen (dumbbell tumors)

h) Masson’s vegetant intravascular hemangioendothelioma