Vertebral haemangioma

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Vertebral haemangiomas are a location specific subtype of haemangiomas. They are most common of the benign vertebral neoplasms. They are usually asymptomatic and incidentally detected due to their characteristic features on imaging for other reasons.

Epidemiology

The incidence of vertebral haemangiomas is about 10% at autopsy. The majority of haemangiomas are incidentally noted on routine radiographs of the spine. Often, small hemangiomas cannot be visualized on plain
Clinic presentation

Most haemangiomas are asymptomatic. Collapse of the vertebral body or encroachment into the neural canal are some of the classic causes of pain. An increase in activity can cause the vertebral haemangioma to become painful, such as starting to exercise, housework and such. This is most likely due to axial loading through the body of the vertebra.

Pathology

They are composed of vascular spaces which causes a displacement of bone. In some cases, specifically capillary types, lytic erosion into the epidural space can occur, however rare. They are slow growing and most are not symptomatic.

Distribution

The majority of all vertebral hemangiomas occur in the thoracic spine, but can be found throughout the spine.

Radiographic features

The classic “corduroy cloth” appearance is strongly associated with vertebral hemangiomas.

MRI

On T1 and T2 Weighted MRI sequences, a bright, high intensity zone is seen due to fat. The signal will be more intense on the T2 due to its affinity to show water as very bright. Thickened trabecula appear as low signal areas in both T1 and T2 images. MR shows extraosseus components better.

- **T1 C+:** with contrast, significant enhancement seen due to high vascularity

CT

Axial CT will show a “polka dotted” appearance due to the thickened vertebral trabeculae.

Treatment and prognosis

Treatment for most hemangiomas is not necessary. When neurological deficits or severe pain treatment is necessary. In symptomatic lesions, there are many options which must be weighed. Radiotherapy, balloon kyphoplasty or transarterial embolisation with associated laminectomy are some of those options. Serious bleeding can be a complication so care must be taken when undergoing open procedures.

References

Synonyms & Alternative Spellings
Case 2
Drag here to reorder.

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Case 3: with polka dot sign
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Case 4: with polka dot sign
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