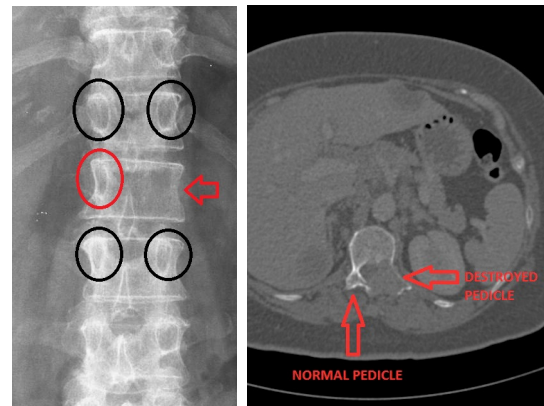


(Refer to page 112)

Answer: Winking owl's eye sign of vertebral pedicle destruction secondary to a metastasis

Bone metastases are a common feature of disseminated malignancy. Metastases may be osteosclerotic or osteolytic in nature, the latter often being destructive in nature. Primary tumours most commonly involving bone include; breast, lung, prostate, and renal tumours. ¹ When involving the spinal column, lesions may involve the body of the vertebra, posterior elements or both.

Metastases that involve and destroy a pedicle can give rise to a distinct appearance on the antero-posterior (AP) view of the spine – the Winking owl's sign (**Panel**). On the AP view of a normal thoracolumbar spine radiograph, both pedicles are observed end on, giving a circular appearance, similar to a pair of eyes. The vertebral body represents the owls' head and the spinous process its beak. If one pedicle is destroyed this is no longer seen, as if the eye is absent or closed (**Panel**). Although other aggressive causes have been documented, such as tuberculosis,



Radiograph image showing missing left pedicle in the first lumbar vertebra (indicated by arrow). Computed tomography showing destruction of the pedicle secondary to a metastatic deposit (breast). The CT image also show two liver metastases.

the cause is nearly always due to bone metastatic disease, and may well be the initial presentation with back pain. ²

Additional imaging with CT is universally undertaken, not only to assess in greater detail the plain film abnormalities, but in the process of identifying or staging the responsible primary malignancy. In this case a breast mass was identified on clinical examination and subsequently imaged. Biopsy confirmed a primary breast malignancy.

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