

Dermal sinus

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History

6 month old with history of epidermoid. No prior imaging or additional history.

Diagnosis

Dermal sinus with epidermoid

Discussion

Dorsal dermal sinuses are epithelium lined tubes that extend inward from the skin surface a variable degree. Likely due to a focal area of incomplete separation of cutaneous and neuro ectoderm. A pinpoint opening or dimple is usually visible on the skin in the midline or paramidline. There may be an associated pigmented patch, nevus or angioma. Meningitis or abscess are associated complications.

The sinus reaches the spinal canal in over half of cases. The sinus may reach and tent the dura without penetrating it or may penetrate through to drain into the subarachnoid space or end in a nodule or cyst. Approximately half end in a dermoid or epidermoid. In the midline, a dermoid is more common and paramidline, an epidermoid.

MRI best demonstrates dermoid and epidermoid tumors. Signal of dermoids and epidermoids is typically similar to CSF and this complicates the detection of extramedullary lesions, particularly in the presence of CSF flow artifact. DWI or FLAIR may help to reveal an epidermoid as in this case. Findings indicating infection should be evaluated for in these cases.

Findings

Hypointense T1 hyperintense T2 sinus tract extending from the skin to the dura in the upper to mid thoracic region. Small hypointense T1 hyperintense T2 extramedullary subarachnoid cyst dorsal to the spinal cord and to the right of midline with associated restricted diffusion. Also, in the midline and along the dermal sinus a nodular hyperintense T1 and T2 lesion was present that may be fat or a small dermoid cyst (visible on the axial T1 image provided).

Reference

Barkovich; Pediatric Neuroimaging.











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