Intracranial Dermoid - Rare Cause of Oculomotor Nerve Palsy

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ABSTRACT:
Congenital intracranial dermoid tumors are a rare entity. Dermoid cyst in the lateral wall of cavernous sinus presenting with third nerve palsy as lone deficit is rare. Herein we report a case of a cavernous sinus dermoid cyst in a 55 year old woman who presented with complete Oculomotor nerve palsy, diagnosed with MRI features. Neurosurgical intervention was done and deficits resolved.

Key Words: Dermoid cyst, cavernous sinus, Oculomotor nerve palsy.

Case study:
A 55 old female presented with history of binocular diplopia with right ptosis of three months duration which was of insidious onset. There was no history of headache, fever, ocular pain, redness of eyes, other cranial nerve symptoms, weakness of limbs and ataxia.

On examination there was pupillary involving complete third nerve palsy. No other deficits were elicitable. Metabolic work up was normal.

In view of suspecting PCOM aneurysm, CT ANGIOGRAM was done and was normal.

MRI BRAIN showed Right Cavernous sinus cystic lesion (2.2 × 1.8 × 1.9 cm) which showed T1,T2, FLAIR heterogenous hyperintense signal (proteinaceous content, fat) with no loss of signal on fat saturation sequence except for thin rim of fat component in anterior aspect. There was no diffusion restriction or perilesional edema.

Posterior wall of the lesion showed T1,T2 hypointensity with hypointensity on SWI suggestive of calcification. There was no enhancement on contrast study, but there was mass effect in the form of lateral displacement of dura. These imaging features were suggestive of cavernous sinus dermoid cyst.

Thrombosed aneurysm is a differential imaging possibility, which was ruled out by CT Angiogram. Patient underwent neurosurgical intervention and Oculomotor nerve palsy improved. After ten days there were no ptosis and diplopia.

Discussion:
Dermoid cysts originate from ectodermal remnants and are commonly located close to midline structures, which usually present in early decades of life. They constitute 0.5–0.7% of intracranial tumors and contain dermal structures.

Supratentorial dermoid cysts are often located in suprasellar, parasellar areas. Dermoid cyst in the wall of cavernous sinus is rare and presenting with oculomotor palsy as the initial and lone manifestation is a rare entity.

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