AJPMHS
GLOBAL RESEARCH NETWORK

AMERICAN Journal of Pediatric Medicine and Health Sciences
Volume 02, Issue 04, 2024 ISSN (E): 2993-2149

EXTRADURAL DERMOID TUMORS OF THE POSTERIOR FOSSA

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Abstract

Dermoid tumors in children usually occur in two locations: in the anterior fontanel and on the occipital scales. The exclusive site of occurrence of a dermoid cyst of the posterior fossa is the extradural space. Only six previously similar cases have been described in the literature. A series of pediatric lesions have been reviewed and children with extradural posterior fossa dermoids have been reported..

Keywords: opticochiasmatic arachnoiditis**,** sinuses, meningitis or cerebellar

Introduction

Dermoid tumors in children usually occur in two locations: in the anterior fontanel and on the occipital scales. The exclusive site of occurrence of a dermoid cyst of the posterior fossa is the extradural space. Only six previously similar cases have been described in the literature. A series of pediatric lesions have been reviewed and children with extradural posterior fossa dermoids have been reported.

The incidence of cranial dermoids in children is well known. Dermoid cysts are often found in the anterior fontanelle and occipital region in children. Anterior fontanel dermoids have generated widespread debate in the neurosurgical literature for two reasons: a presumed racial predominance among black individuals and significant concern about intracranial penetration, although to date no cases of anterior fontanel dermoids have been associated with the dermal sinus. On the other hand, dermoid tumors of the occipital region are often combined with congenital cutaneous fistulas and severe intracranial infection in the form of meningitis or cerebellar abscess. Most dermal sinuses of the posterior fossa terminate blindly in the subcutaneous tissue or are associated with intradural dermoids..

Materials and methods PatientA 27-month-old girl was admitted for treatment of a subcutaneous lesion found on the back of her head at birth. After a slight blow to the head, the mass increased and the child often touched the swelling. Upon examination, a subcutaneous node with a diameter of 3 cm and a small median skin opening located above it were discovered. X-rays of the skull revealed a multilobed, partially sclerotic zone of bone lucency. MRI revealed isointense extracranial and intracranial lesions separated by a thin zone of bone that appeared to communicate with the skin through a bony gap. An occipital craniotomy was required to completely remove the tumors and fistula. The intracranial part of the neoplasm appears to have arisen from two layers of dura mater. During dissection, the occipital venous sinus was ruptured, causing significant bleeding. Histologic

examination revealed a cyst lined by keratinized squamous epithelium, areas of abundant hair follicles, and foreign body-responsive granulomatous lesions. The child's immediate recovery and short-term follow-up were uneventful. Logue and Till classified posterior fossa dermoid cysts into four groups depending on whether they were extradural or intradural and the degree of dermal sinus development (absent, partial, or complete): (1) extradural dermoid cyst with complete sinus; (2) intradural dermoid cyst without dermal sinus, (3) intradural dermoid cyst with incomplete dermal sinus, and (4) intradural dermoid with complete dermal sinus.10 When cysts are extradurally located, the occipital dermal sinus always appears solid, connecting the tumor to the skin

Conclusions

In our experience, the operation was far from simple; all of our patients experienced heavy bleeding when the cyst was isolated from the underlying dural sinuses, and one case was complicated by the accumulation of epidural empyema, which required reoperation. Although only one of our patients had obvious signs of infection at the time of presentation, all three had varying degrees of infection. This finding suggests that if the lesions are not removed promptly, they are at risk of developing overt intracranial infection despite an obvious barrier to infection.

In conclusion, we would like to recommend early surgical excision of extradural dermoid cysts of the posterior fossa, especially since they can become infected through the dermal sinus with which they are invariably associated

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