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CASE REPORT

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External angular dermoid cyst: An unusual case report with surgical intervention and clinico-pathological analysis

Cisto dermóide angular externo: um relato de caso incomum com intervenção cirúrgica e análise clinico-patológica

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ABSTRACT

Dermoid and epidermoid cysts which belong to choristomas, usually manifest clinically as superficial and deep cystic movable formations, most often with a slow and intermittent growth. In the present article we report a case of an external angular dermoid cyst in a 13-year-old boy, the growth of which was steady on progression. Surgical excision of the cyst was done by approaching through an external sub-brow incision. Dermoid cysts are unusual neoplasms that often seen in children with the most commonly affected site being the orbit in the head and neck region. Such cysts may cause compression to the eye lobe and the optic nerve. Hence, operative procedures may be suggested in the case of such cysts which have a constant progression.

KEYWORDS

Choristoma; Dermoid Cyst; Sub-brow incision.

RESUMO

Cistos dermóides e epidermóide, que pertencem a coristomas, geralmente se manifestam clinicamente como formações císticas móveis superficiais e profundas, mais frequentemente com um crescimento lento e intermitente. No presente artigo relatamos um caso de um cisto dermóide angular externo em um menino de 13 anos, o crescimento que estava regular na progressão. A excisão cirúrgica do cisto foi feita por aproximar-se através de uma incisão externa sub testa. Cistos dermóides são neoplasias incomuns que muitas vezes são vistas em crianças, com a mais comumente área afetada sendo a órbita na região da cabeça e pescoço. Tais cistos podem causar compressão para o lobo dos olhos e o nervo óptico. Portanto, podem-se sugerir procedimentos operacionais no caso de tais cistos que tem uma progressão constante.

PALAVRAS-CHAVE

Coristoma; Cisto Dermoide; Incisão supra orbital.

INTRODUCTION

Choristomas are benign tumors that are modulated during the embryonic growth from tissues which are not normally expected to be there [1]. Dermoid and epidermoid cysts signify congenital cystic benign tumors and belong to choristomas which is originated from an aberrant primordial tissue. During such an embryonic development of the skull and the orbital suture, dermal or epidermal elements remain compressed and form a cyst with a constant tendency to enlarge and progress [2]. Nearly 10% of dermoid cysts of head and neck are localized in the orbit. The cysts of the periorbital area can be situated at different regions depending upon the position of suture, size and degree of growth. Upper orbital quadrant is the most confined area of this lesion [3,4]. At birth these cystic changes are revealed, but it can be seen or even indicate the possibility

of growth at any time [5]. The cyst is soft upon palpation, oval in shape, 2-3 cms in size and mobile under the skin. The inner part of the cyst, which is not accessible for palpation is usually attached to the bone periosteum near the suture lines [6]. Dermoid and epidermoid cysts cannot be differentiated clinically and a diagnosis is usually made after a histopathological evaluation. Dermoid cysts have squamous epithelium that contains dermis and keratin. They usually contain blood vessels, fat tissue, collagen, sebaceous gland and hair follicles [7,8]. In the present case we have discussed a cyst in the periorbital area which was deep showing bony erosion in the adjacent orbital roof without intracranial extension, along with the surgical procedure, histopathological aspects and the treatment modalities. In the majority of these cases the excision of the cyst with an intact cystic wall is suggested because of the risk of spontaneous rupture. A surgeon should be concerned about chances of the rupture of the cyst. Cystic contents should be aspirated followed by excision of the cystic wall which is considered as a safe and an easy technique for excision of dermoid cyst [9].

CASE REPORT

A 13-year-old boy presented with a six months history of right- sided painful supraorbital swelling (Figure 1). He reported experiencing double vision worsening over several months as well as inferior displacement of eye. The ophthalmic examination revealed a horizontal diplopia with an intraocular pressure of 19 mmHg on the right side (affected eye) and 14 mmHg on the left side. Surgical excision was done by an external sub-brow incision by incising the skin and dividing the orbicularis oculi muscle through that incision. A sub muscular blunt dissection was performed to avoid the premature rupture of the cyst (Figure 2). After the exposure of the anterior portion of the cyst, surgical drapes were applied around the cyst, the cystic wall was grasped with an artery forceps at the site of the incision and the wall was twisted, dissected and removed. Triamcinolone was applied to the site of the cyst and then the incision was closed with polygalactin 5/0 sutures, and the skin was closed with black silk 5/0 sutures. The specimen was sent for histopathological evaluation. The gross specimen measured around 2x2 cm in dimension (Figure 3). The Haematoxylin and eosin stained section revealed an epithelial lining with sebaceous glands and hair follicles. The cyst contained lipid and keratin debris consistent with the diagnosis of a dermoid cyst (Figure 4). Post operatively systemic antibiotics and analgesics were given for a week and the sutures were removed after 5 days. Patients were followed for 6 months to monitor post-operative inflammation and recurrence.

Figure 1 - Supraorbital swelling on left side of orbit.

Figure 2 - Sub muscular blunt dissection.

Figure 3 - Gross specimen measured around 2 x 2 cms in dimensions.

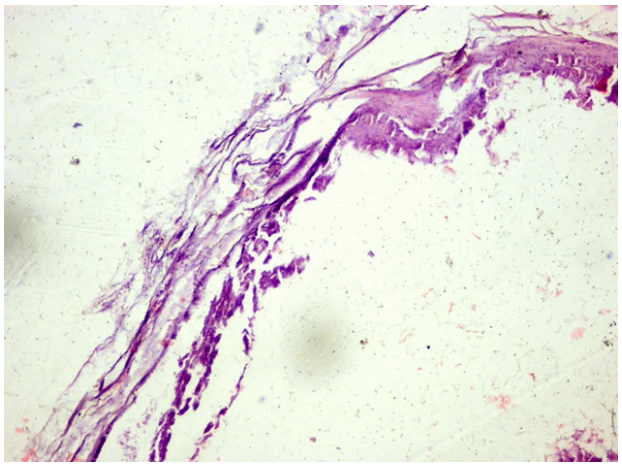

Figure 4 - Figure 4. Section showing fibrous cystic capsule and lining squamous epithelium. (HandE stain,10X).

CONCLUSION

Dermoid cysts are a subgroup of a benign heterotopic neoplasms termed choristomas and account for up to 9% of pediatric orbital tumors [10]. Early diagnosis of dermoids are done when they are situated in the anterior part of periorbital region. Anterior to the frontozygomatic suture line the cyst exists as a soft tissue swelling in the eyelid. It can be diagnosed early at childhood due to the location of the cyst. A deep orbital dermoid cyst may remain clinically occult until adulthood, when they enlarge and produce proptosis or displacement of the globe, and may leak material from the cyst into the surrounding tissues, producing inflammation [11]. In the present study, we have discussed a case where a deep orbital dermoid presented itself since childhood. There is a rare occurrence of deeper orbital dermoids which grow indolently which is presented in teenage years and beyond [12]. Pryor et al. reviewed 49 cases of pediatric dermoid cysts and found the periorbital region to be the most common. Their study showed that 61% of cases presented periorbitally. Midline nasal and forehead dermoids accounted for only 16% of cases. Within the periorbital region, the lateral orbit (adjacent to the lateral canthus) was the most common location. The medial canthus was the second most common location [13]. Dermoid cysts are usually excised completely using an approach that is appropriate to the location in the orbit. Yuen et al. used lid crease incision in medial dermoids and some lateral dermoids. Excision of cysts around the eyebrow were performed by giving incision below, above and through the brow [11]. In the present study, lateral sub-brow incisions were used for excision of external angular dermoid cyst. To evade the persistent inflammation, a draining sinus or recurrence of the cyst the entire cyst must be excised. Yuen et al. did not find significant inflammation postoperatively in ruptured cysts. He thoroughly washed the area with isotonic saline, and used a suction to drain the cyst at the time of rupture. Total excision of dermoid cysts is obligatory to avoid postoperative inflammation [14]. The differential diagnosis, based on location, includes epidermal inclusion cysts, glioma, lipoma, and teratoid cysts [13].

Considering the fact that these kinds of cysts mostly affect children, a special caution and care should be applied regarding the type of tumor and its accurate localization. The cyst should be completely removed, with minimal trauma and should provide a satisfactory aesthetic effect.

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