EXTERNAL ANGULAR DERMOIDCYST: A RARE CASE REPORT

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ABSTRACT Dermoid and epidermoid cysts, categorized under choriocarcinomas, are clinically presented as cystic, mobile, superficial and deep structures mostly exhibiting slow and recurrent growth. This case report is based upon a rare case of a 4 years old girl who presented with a dermoid cyst of the external horn with stable growth. Surgical resection of the cyst was completed approximately through the external incision of the sub-brow. The dermoid cyst is a rare tumor that is commonly reported in children. The orbit of head and neck region is the most commonly affected site. This cyst can cause compression over the optic nerve and lobe of the eye. Therefore, for this kind of growing cyst, surgical procedures may be recommended..

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INTRODUCTION

Choristomas are benign tumors that are commonly originated from tissues that do not normally exist during embryonic growth (1). Dermoid and epidermoid cysts are usually present congenitally as cystic benign tumors originating from abnormal parent tissues. The unusual compression of the dermal or epidermal components may form cysts during the period of embryonic formation of the skull and the sutures of the orbital cavity which later tend to expand and grow (2). Of the reported cases of head and neck dermoid cysts, almost 10% are located in the orbit. Depending on the location, size, and degree of growth of the suture, cysts can be present in different zones of the per-orbital area. The most commonly confined zone by the lesion is the supra-orbital quadrant (3). Usually, the cystic formations appear at birth, but they may present at any stage (4). On palpation, the cyst may appear to be soft, oval shaped, 2-3cm in length and moveable beneath the skin. Interior of the non-palpable cystic structure is usually attached to the periosteum near the sutures (5). Clinically it is nearly impossible to distinguish between dermoid and epidermoid cysts, and intensive histopathological assessments and evaluations are needed to make a confirm diagnosis. Dermoid cysts are comprised of squamous epithelium containing the dermal tissue and keratin. They also contain blood supply, fatty tissue, accessory sebaceous glands, collagen fibers and hair follicles (6).

CASE PRESENTATION

A 04-year-old girl had left supraorbital swelling and pain for 6 months The cyst was deep and showed erosion of the adjacent orbital roof but without intracranial extension. In most of these cases, due to the risk of spontaneous rupture, it is recommended to remove cysts with intact cystic walls. An incision was made through the skin and while separating the flaps of orbicularis oculi, surgical removal was performed through the external incision of the sub-brow. A blunt submuscular dissection was underwent in order to prevent the premature bursting of the cystic tumor (Figure 1). Subsequently, exposing the cyst anteriorly, wall of the cyst was removed using artrial forceps. Triamcinolone was applied at the site of cyst, later on, 5/0 polygalactin suture was used to close the incision site while the skin was sutured back using 5/0 black silk suture. Sample from the excised tissue was then forwarded for histopathological analysis. The measurement of the sample was approximately 3x3 cm (Figure 2). Hematoxylin and eosin stained sections showed epithelial linings containing glandular sebaceous cells and hair follicle. They also contained fragments of lipids and keratin, which are compatible with the diagnosis of dermoid cysts. After surgery, the patient was administered pain relievers and antibiotics systemically for seven days. Sutures were removed following 5th day of the surgery.

DISCUSSION

Dermoid cysts, accounting for 9% of the orbital tumors among children, are subtypes of benign heterotopic group of tumors known as choriocarcinomas (7). When the dermoid is located in the anterior part of the periorbital area, it can be diagnosed early. In front of the zygomatic suture of the forehead, the cyst usually present itself as swelling of the soft tissue of the eyelid. Due to the location of the cyst, diagnosis can be easily made in early ages (8). However, deep dermoid cysts of the orbit may exist clinically insidious till the adulthood after which their growth causes bulging appearance and displacement of the eyeball. The oozing material from the cyst may involve surrounding tissue leading to inflammatory response (9). This case study is documented to present a rare case of deep orbital dermoid cyst that has appeared since childhood. Deeper orbital endothelioid tumors rarely occur. This type of tumor grows slowly and appears in age group of adolescence and above (10). A review of 49 cases found that the most commonly affected site by dermoid cysts among pediatrics, is the periorbital area. The results of their study concluded that 61% of theses cystic tumors were located around the orbit. While 16% of observed cases were involving the midline of the nose and the dermoid area of the forehead. Talking of the periorbital area, the most inhabited location by the lesion is the lateral arch of orbit close to lateral canthus. While the second most frequently involved side is medial canthus (11). This benign cystic tumor can be completely resected adopting a method suitable for orbital position. Yuan et al. reported the use of eyelid crease incisions on inner skin samples and some outer skin samples. Cysts around the eyebrows are removed by cutting below, above, and through the eyebrows (12). In this study, the lateral incision of the subbrow was used to remove the dermoid cysts in the outer corner. According to Yuan et al., to avoid persistent inflammation, sinus drainage, or intermittent appearance of the cyst, the complete excision of the cyst must be undergone (13). No obvious swelling was found after the cyst ruptured. The area was thoroughly washed using isotonic saline solution and the ruptured cyst was drained off using a straw. Moreover, complete removal of the cyst is necessary to prevent inflammation postoperatively (14). Differential diagnosis based on the location of the tumor enlists the epidermal cysts, gliomas, lipomas, and heterotopic teratomas (15).

CONCLUSION

Considering the fact that such types of cysts affect the children more often, emphasis should be given to type of cystic tumor and identification of their precise positioning as it may carry traumatic injury or loss of eye sight. In the case discussed in this study, the cyst was entirely resected safely with negligible trauma to the normal tissues yielding satisfactory cosmetic outcome.

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Figure 1: Sub-brow Dermoid cyst

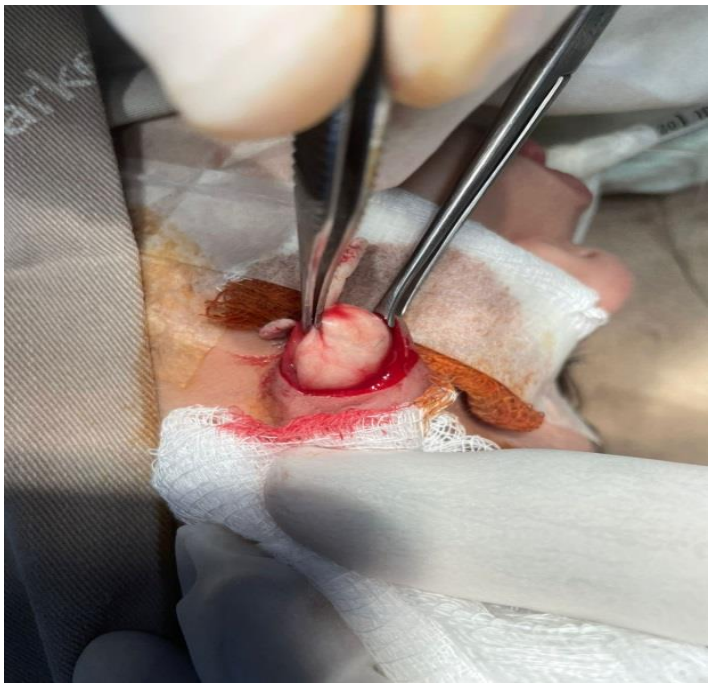

Figure 2: Size of Dermoid cyst