CASE REPORT

Recurrent Unilateral Post-Auricular Dermoid Cyst: A Case Report

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Introduction:

Dermoid cysts are a type of teratoma occurred as a result of the sequestration of the skin along the lines of embryonic closure. They occur most commonly on the face, scalp or neck. Approximately 7% occur in the head and neck area. Post-auricular dermoid cysts are extremely rare, reported in few case reports[1,2,3].

Congenital inclusion dermoid cysts form along embryonic fusion lines and contain both dermal and epidermal derivatives. Dermoid cysts of the head and neck are believed to be congenital inclusion cysts which may present elsewhere in the head. Depending on the location of the lesion, dermoid cysts may contain substances such as nails and dental, cartilage-like, and bone-like structures. If limited to the skin or subcutaneous tissue, dermoid cysts are thin-walled tumors that contain different amounts of fatty masses; occasionally, they contain horny masses and hairs. Dermoid cysts in the skin and subcutis occur mostly on the face, neck, or scalp. Dermoid cysts of the ovary are sex restricted, that is, they occur only in the female population. In other dermoid cysts, no sex predilection has been found. Dermoid cysts have been described in persons of all ages[4].

Dermoid cysts on the face, neck, or scalp are subcutaneous cysts that are usually present at birth. Intracranial or peri-spinal dermoid cysts are most often found in infants, children, or young adolescents. Intracranial dermoids are rare and are usually associated with cutaneous scalp lesions. High-risk cases can be identified by clinical and radiological features, confirmed by a computed tomography scan, and then referred for neurosurgical treatment[5].

Extracranial subcutaneous masses involving the scalp and/or skull in a middle aged men or women are not common lesions. Dermoid cysts in post-auricular area are less likely to present with abscess formation resembling discharging sinus. Impaction of foreign body in an intention to cure by quack in a village invites the abscess formation and extends it beyond the post auricular region and finally makes the dermoid cyst a hugely swollen abscess cavity with a discharging sinus like lesion in the scalp. A CT scan finding is important here to exclude intra cranial extension. CT scan is not done routinely in a case of non infected dermoid cyst. Principle of

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management of dermoid cyst is total excision of sac. In case of foreign body impaction, it should be explored and removed.

Case Report:

A 40 year old female from Chandpur, Bangladesh presented with slowly progressive swelling over left temporal region, which has been existing since January 2012. For the last six months, the swelling was associated with pain. The women first underwent a crude procedure for the swelling by a quack in her village. In the process she received multiple thorn pricking into the swelling which were of wood nut tree and started antibiotics. Despite this unscientific procedure and a course of antibiotics, discharge of pus was persisting. Meanwhile she again went to the quack and received 8 pieces of thorn into the discharging swelling for remedy. 2-3 weeks later the woman also developed profuse foul smelling discharge from the swelling with low-grade fever without chills and rigors. After four months of suffering, she liked to get medical treatment and went to an ENT specialist where incision and drainage with debridement of infected tissue of scalp was done. By unveiling the story of quack treatment, 3 thorns of wood nut tree was recovered from the abscess cavity of the scalp and the tissue collected from the abscess wall was recognized as dermoid by histopathological examination. But the discharging of pus reduced for a while and again started with foul smelling profuse muddy colored pus. The profuse foul smelling discharge of pus could not be stopped by antibiotic of different generation and regular dressing. On local examination soft, tender swelling (8 x 6 cm) over left occipito-temporal region was found. There was grayish pus discharge from the swelling. Pus culture yields no growth. With these features, she got admitted to Holy Family Red Crescent Medical College Hospital, Dhaka, Bangladesh as a referred case and on September 2012. Immediately after admission she received a revision surgery by excising the dermoid completely with recovering of another 5 thorns of same successfully.

Gross picture of the cut section of the cyst indicated the diagnosis of dermoid cyst with foreign body. Dermoid cyst was confirmed on microscopic examination by the presence of stratified squamous epithelium, sebaceous glands and numerous hair follicles with hair shafts. The post operative period was uneventful. The patient was discharged after one weak.

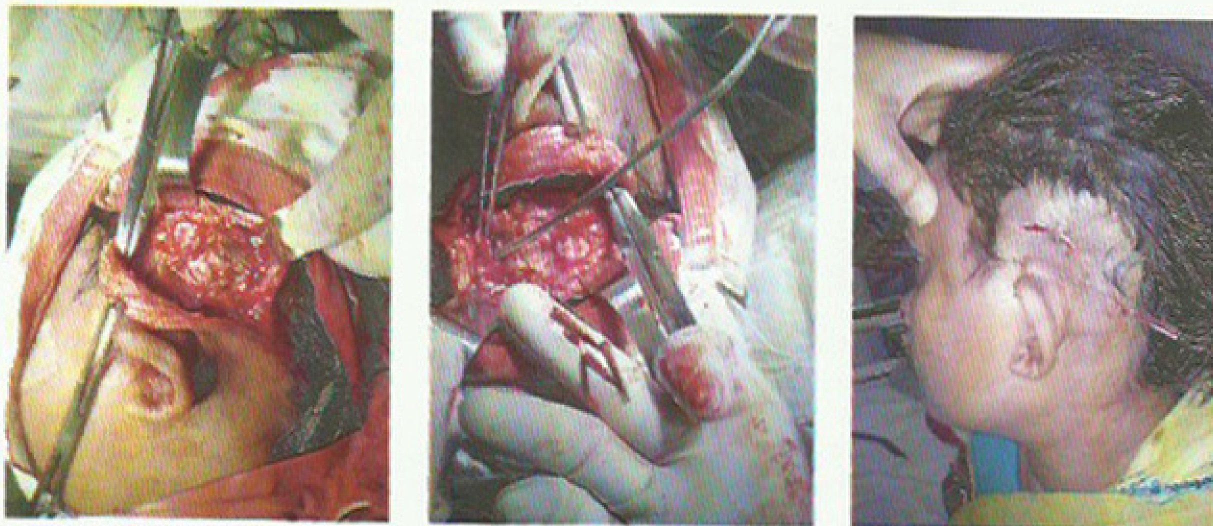

Figure-1: Removal of post-auricular dermoid cyst with foreign bodies.

Discussion:

Dermoid cysts are very rare in head and neck area and its presence in post-auricular region is further exceptionally rare. Only few cases have been reported so far. However, the dermoid cysts have also been reported in the auricle, middle ear, and in the auriculo-temporal area[6,7].

Dermoid cysts are congenital anomalies that arise from trapped pouches of the ectoderm near the normal fold or from the surface ectoderm that has failed to separate from the neural tube. Meagher et al suggest the cause for the bilateral prominent ears due to dermoid cyst is multi-factorial with certain strong familial predilection[1].

Crawford reported three patients with intracranial extension associated with their midline scalp lesion, an incidence of 2.4%. Intracranial extension was initially suspected on plain skull X-ray. This was confirmed by CT scan and surgery in two cases, CT scan was negative in the third[8]. Pyror et al. reported two patients with intracranial extension of their dermoid tumors, one nasal dermoid confirmed with CT and MRI imaging, and one ear/temporal bone dermoid cyst which was confirmed with CT imaging. Dermoid cysts with intracranial extension are usually associated with midline lesions and the presence of a sinus, dimple or abnormal hair distribution should also raise the suspicion of intracranial extension.

Patients with post-auricular dermoid cysts usually seek medical advice for the cosmetic reasons because of the embarrassing look of the prominent unilateral or bilateral post-auricular swelling with discomfort. In this case, the patient went to quack for the very same reason for correction of post-auricular swelling. But patient got abscess with sufferings due to wrong treatment of quack by introduction of foreign body into it. However, this case illustrates that these findings are not always present in dermoid cysts with discharging pus. It is prudent to perform either an MRI or CT scan in any suspected dermoid cyst in the skull region to assess for intracranial extension particularly where surgical excision is planned.

If dermoid cysts are diagnosed early and treated with complete surgical excision, the prognosis is good, unscientific crude method should not be practiced and no further complications are expected.

References:

1. Meagher PJ, Morrison WA. An unusual presentation of bilateral prominent ears. Br J Plast Surg 2001; 54: 366-67.
2. De Souza BA, Dey C, Carver N. A rare case of dermoid cyst behind the ear. Plast Reconstr Surg 2003; 112: 1972.
3. Akguner M., Karaca C, Kurtoglu B, Menderes A, Karata O. Postauricular dermoid cyst: a case report. Eur J Plast Surg. 1996;19:332.
4. Schwartz Robert, 24 Feb 2012, `Dermoid cyst'. http:// emedicine.medscape.com/ article/ 1112963 -overview. [Viewed on 6 October 2012]
5. Dermoid cyst of the scalp: intracranial extension, J Paed Surg 1990; 25: 294-95.
6. Minatogawa T, Node MN, Fukuda I, Kumoi T. Dermoid cyst in the middle ear. J Laryngol Otol 1993; 107: 335-38.
7. Samper A, Ruiz de Erenchun R, Yeste L, Bazan A. Dermoid cyst on the auriculotemporal area. Plast Reconstr Surg 2000; 106: 947-48.
8. Crawford R. Dermoid cyst of the scalp: intracranial extension. J Paed Surg 1990; 25: 294–95.
9. Shepherd G, Pryor , Lewis J, Weaver A, Orvidas L. Pediatric dermoid cysts of the head and neck. Otolaryngol. Head Neck Surg.2005; 132: 938–42.