

Post-Traumatic Epidermoid Inclusion Cyst in the Chin Region

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Epidermoid cysts of traumatic origin are found mainly on palms, fingers and soles. They are believed to originate through implantation of epithelium by either surgical or accidental trauma into deeper mesenchymal tissue. A case of traumatic epidermoid inclusion cyst of the chin region is described.

Keywords: Epidermoid cyst, Trauma, Inclusion cyst, Chin

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INTRODUCTION

Epidermoid cysts are one amongst the non-odontogenic cysts that may occur in and around the oral cavity. They usually derive from the germinal epithelial layer or may be acquired through the inclusion of the epidermal tissue as a result of external injury or incision on the skin. Accordingly, they have been classified as primary or secondary.¹ The purpose of this article is to describe a case of an epidermoid cyst that had resulted because of trauma to the chin region.

CASE REPORT

A thirteen years-old female patient reported with a painless swelling on the left side of her chin. The swelling started initially and increased in size over a duration of four months (Figure 1). The patient gave a history of trauma in the same region six months back. Extra oral examination revealed a 2x2 cms well circumscribed swelling over the left side of the chin region. There was a scar mark over the centre of the swelling. Upon bimanual palpation, dough like, non-tender and freely mobile mass was felt. There were no radiographic features associated with the swelling. A provisional diagnosis of lipoma/fibroma was considered.

Under local anesthesia, a transverse incision was made

exactly over the scar mark and the mass was exposed (Figure 2). The mass was dissected and removed intact. The wound was closed with 3-0 silk sutures. The post-operative period was uneventful and healing was good. The specimen consisted of an oval mass measuring 2x1 cms, with a whitish glistening surface, soft in consistency, cystic in nature and filled with a cheesy material upon sectioning. Histopathological examination revealed a cystic cavity lined



Figure 1. Swelling associated with the left side of the chin region



Figure 2. Clinical appearance of the mass after surgical exposure presenting with a whitish glistening surface

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Figure 3. Photomicrograph showing stratified squamous epithelium (E) supported by fibrous connective tissue stroma (CT) and the lumen filled with orthokeratin (K) (H&E Stain, magnification X 15)

by stratified squamous epithelium with absence of rete ridges and adnexal structures. The cystic lining epithelium was well supported by a thin fibrous connective tissue stroma and the lumen was filled with flakes of orthokeratin (Figure 3). Based on history, clinical features and histopathological features, this case was diagnosed as post traumatic epidermoid cyst of the chin region.

DISCUSSION

An epidermoid cyst was first reported by Pinson in 1807.² The incidence of epidermoid and dermoid cysts in the head & neck region has been reported to range from 1.6% to 6.9%.³⁻⁷ Depending on the pathogenesis, epidermoid cysts can be divided into the congenital and acquired types.¹ The former is thought to develop from congenital inclusion of ectodermal tissue during embryological development. The latter type, first recognized by Werhner in 1855⁸ and originally referred to as “implantation cyst” by Sutton in 1895,⁹ is believed to originate through implantation of epithelium by either surgical or accidental trauma into deeper mesenchymal tissues. There is usually a latent period after injury before the cyst is noticed clinically. When healing takes place, the implanted epithelial cells multiply, producing a central mass of keratin. Clinically their presence is suggested by a slow-growing, painless, well-circumscribed firm swelling. Epidermoid cysts of traumatic origin are found mainly on palms, fingers and soles. They consist of two main parts: capsule and contents. The capsule is usually

opaque, white and glistening. The contents of epidermoid cyst consist of concentric laminae of keratin and epithelial debris which have a white soapy or waxy appearance.¹⁰ Dermoid cysts differ from epidermoid cysts by having skin appendages in their connective tissues wall. Since trauma is said to always precipitate in the formation of the implantation – type epidermoid cyst, King¹¹ preferred the term “post traumatic cyst.” These cysts have been produced experimentally in animals by a number of authors since 1884.^{12,13} Similar observations of cyst formation have been made in humans following the inclusion of epithelium in surgical wound sites.^{14,15} There does not seem to be any reported case of malignant change in implantation-type epidermoid cysts.¹ In the head and neck region it may be difficult to differentiate clinically between the implantation-type epidermoid cyst, implanted foreign bodies, chronic infections and benign & malignant lesions of connective tissue and salivary gland origin. A thorough clinical history and histopathology are therefore mandatory for an accurate diagnosis.

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