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Review Article

Therapeutic approach to epidermoid cyst

Ketan Vagholkar*, Suvarna Vagholkar

Department of Surgery D. Y. Patil University School of Medicine, Navi Mumbai, Maharashtra, India

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***Correspondence:**
Dr. Ketan Vagholkar,
E-mail: kvagholkar@yahoo.com

ABSTRACT

Epidermoid cyst is one of the commonest cutaneous swelling treated by a general surgeon. It is usually misnamed as a sebaceous cyst. Understanding the anatomical origin and pathogenesis of the cyst is pivotal for diagnosis and successful treatment. The etiopathogenesis, clinical features and surgical approach is presented in this paper.

Keywords: Diagnosis, Epidermoid cyst, Treatment

INTRODUCTION

Epidermoid cyst also known as sebaceous cyst is one of the commonest swelling arising from the skin. It is commonly located over the face, neck, back and scrotum.[1,2] The cyst has tendency to grow slowly over a period of time. Malignant change rarely occurs in sebaceous cyst.[2]

ETIOPATHOGENESIS

The term sebaceous cyst is a misnomer. True sebaceous cysts which originate from the sebaceous glands are extremely rare and are described as steatocystoma simplex or steatocystoma multiplex if multiple. Epidermoid cysts originate in the epidermis whereas pilar cysts originate from the hair follicle. Epidermoid cysts typically occur in the third to fifth decades of life. They are more commonly seen in males. Less than 1% of these cysts can undergo malignant transformation either to a squamous cell carcinoma or a basal cell carcinoma.[1-3] There is a heredofamilial tendency in a few cases. It is seen in autosomal dominant conditions such as Gardner's syndrome (familial polyposis of the colon) or Gorlin's syndrome (basal cell nevus syndrome).[2] Cyst developing before puberty in uncommon locations and numbers should raise the suspicion of these syndromes. Epidermoid cysts may occur in elderly individuals with chronic sun exposure as seen in Favre-Racouchot syndrome characterized by nodular elastosis with cysts and comedones.[2] Infection with HPV has also been implicated in the development of cysts. Patients on drugs such as BRAF inhibitors, cyclosporine and imiquimod have a high incidence of developing inclusion epidermal cysts.[3-6]

Epidermoid cysts originate from the follicular infundibulum. Plugging of the follicular orifice leads to the formation of a cyst. The cyst communicates with the surface of the skin by way of an orifice which is invariably blocked by keratin.

Epidermoid cysts are lined by stratified squamous epithelium thereby leading to accumulation of keratin within the dermis. Rupture of the cyst leads to an inflammatory reaction involving the dermis and subcutaneous tissues. Histopathological examination of the cyst reveals peculiar features. The cyst is lined by stratified squamous epithelium which is similar to the surface epithelium except for rete pegs which are absent and contains laminated keratin which usually lies at the

level of the dermis. The granular layer is filled with keratohyalin granules.[4-8]

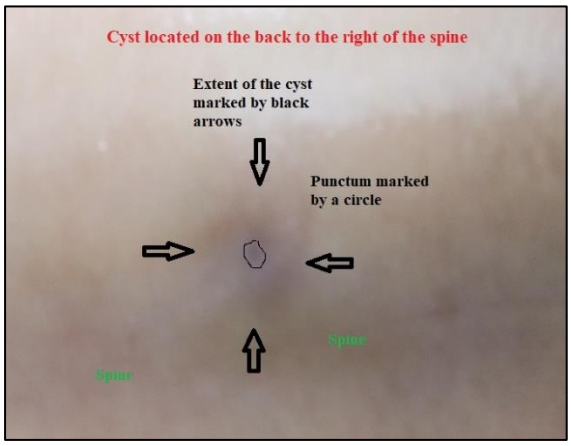

Figure 1: Typical epidermoid cyst with a punctum marked by an arrow.

CLINICAL FEATURES

Careful history is necessary to rule out heredofamilial causes. Majority of cysts are sporadic in nature.[8-10] The commonest presentation is an oval swelling in the skin. The size may be variable. The swelling may or may not exhibit fluctuation depending upon the volume of content within the cyst. Sign of indentation will be present. The black hole or punctum is distinctly visible. (Figure 1) The cyst cannot be separately felt from the overlying skin. Ruptured cysts will present with signs of inflammation simulating an abscess. Foul smelling discharge from the punctum is characteristic. Diagnosis of epidermoid cysts is mainly based on clinical evaluation. No laboratory or imaging tests are necessary to confirm the diagnosis.

TREATMENT

Surgery is the mainstay of treatment.[5-7,11,12] However if the patient presents with local signs of inflammation then surgery should be temporarily deferred until the inflammatory reaction subsides. This can be achieved by local cold fomentation with hygroscopic agents such as magnesium sulphate. Antibiotics and analgesics help in quick recovery. Once the inflammatory reaction settles down then definitive surgery can be contemplated.[13,14]

The surgery can be carried out under local anaesthesia.[15,16] An elliptical incision which should include the punctum is made. (Figure 2) The cyst is separated carefully from under surface of the surrounding skin and thereafter from the underlying subcutaneous tissues taking utmost care to avoid rupture while dissecting. Care has to be taken to avoid leaving any residual cyst wall. (Figure 3a and 3b) Adequate haemostasis followed by copious irrigation with normal saline should be done before approximation of the skin edges. (Figure 4) This is to prevent surgical site infection which is commonly encountered after surgery for epidermoid cysts. Skin sutures are removed after 10 days (Figure 5). If aseptic precautions are exercised at the time of surgery then the chances of developing a bad scar due to infection are extremely less.

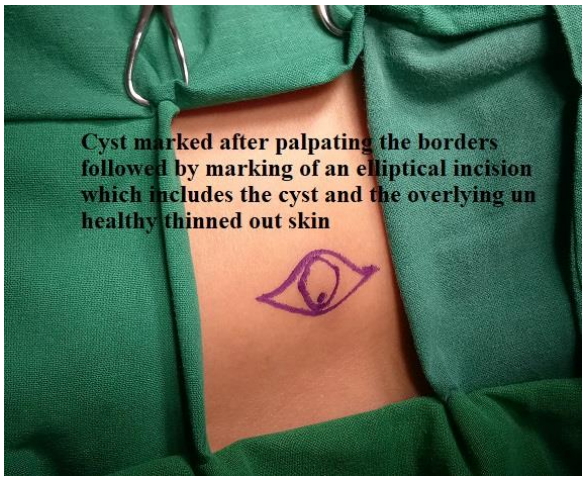

Figure 2: Elliptical incision which includes the punctum.

Figure 3a: Cyst dissected intact without rupture.

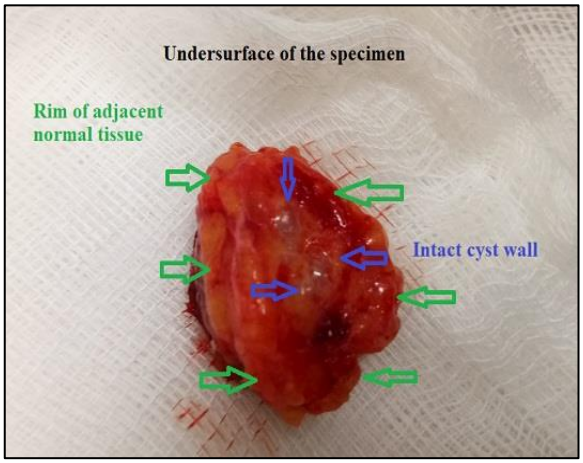

Figure 3b: Excised cyst turned around to confirm complete excision without rupture.

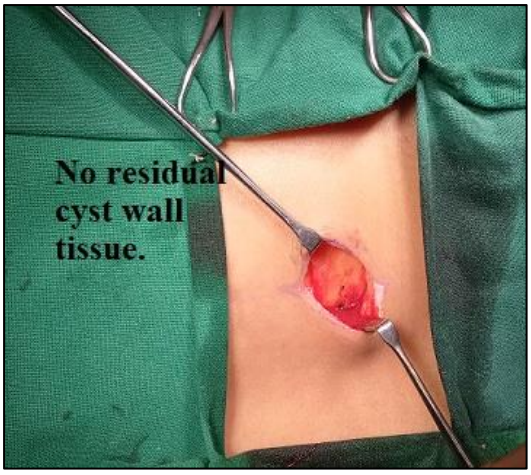

Figure 4: Defect after achieving haemostasis and irrigation with normal saline.

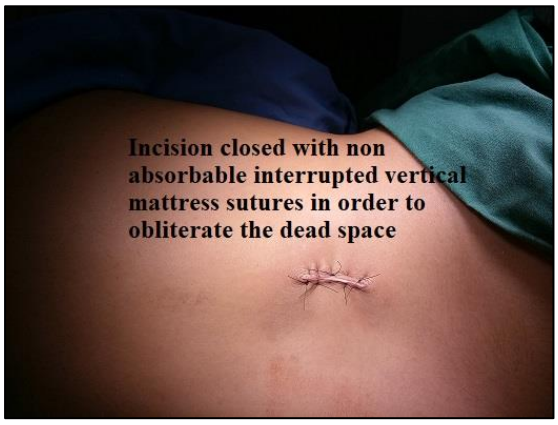

Figure 5: Skin edges approximated.

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