Letter to the Editor

Squamous cell carcinoma arising in an epidermal cyst

Sir,

Epidermal cysts (EC) are commonly encountered in surgical practice.[1] There are only few reports of such malignant transformation in the literature.[2,3] We hereby report a case of squamous cell carcinoma (SCC) arising in an EC.

A 68-year-old man came having complaints about swelling over the right submandibular region since one year. The initial small non-tender and painless swelling of 2 cm × 2 cm had rapidly increased in size since last three months. A swelling of about 6 cm × 4 cm was noted on the right submandibular region. The skin above the swollen region was normal. An ipsilateral single level II cervical lymph node measuring 2 cm × 2 cm was noted. The oral examination was normal. Ultrasound of the neck revealed a large cystic lesion 5.7 cm × 4 cm in submandibular angle with thick turbid contents and foci of calcification with a probable differential diagnosis of dermoid cyst and epidermoid cyst. A subcutaneous cystic swelling with cheesy material was noted intra-operatively. Complete excision was not possible as the cyst was adherent to tissue around. Hence, the sac was excised in bits and sent for histopathological evaluation. Grossly, there were three irregular tissue bits. The outer surface was dark brown and the cut surface was gray white, and one of the bits showed a lymph node measuring 1.5 × 1 × 1 cm. Histopathologically, the multiple sections from the tissue showed an infundibular type of EC lined by stratified squamous epithelium, which was in places hyperplastic [Figure 1] and invasive SCC composed of neoplastic cells arranged in small sheets, clusters and masses [Figure 2]. The cells were showing pleomorphism, nuclear atypia, nuclear hyperchromasia, individual cell keratinization and increased mitotic figures infiltrating the underlying skeletal muscle and fibro adipose tissue. Numerous epithelial pearls were noted in the center of the neoplastic cell nests [Figure 2]. Inflammatory cells were seen between tumor cells. A tumor cell-induced giant cell reaction was noted. The lymph node showed reactive hyperplasia. A well-defined transition between the EC and SCC was

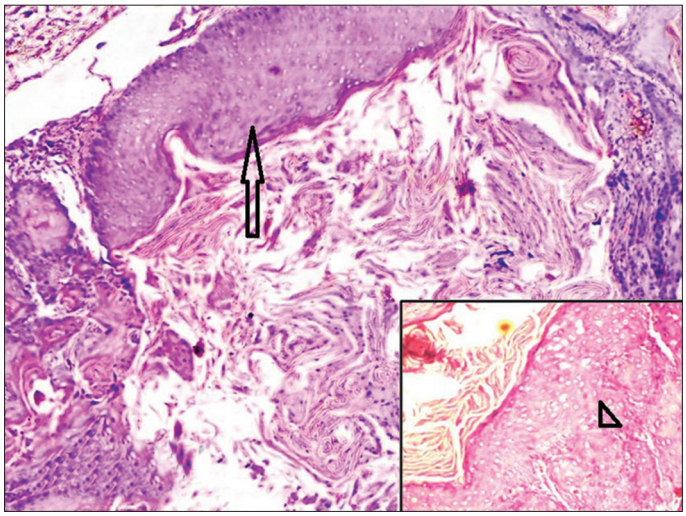

Figure 1: Lining squamous epithelium of epidermal cyst (arrow) filled with keratin flakes. The inset shows squamous hyperplasia (arrow head). (H and E, ×400)

Figure 2: Epidermal cyst (arrow) and well-differentiated squamous cell carcinoma with transition between the EC wall and the tumor (arrow head). Note the epithelial pearls. (H and E, ×100)

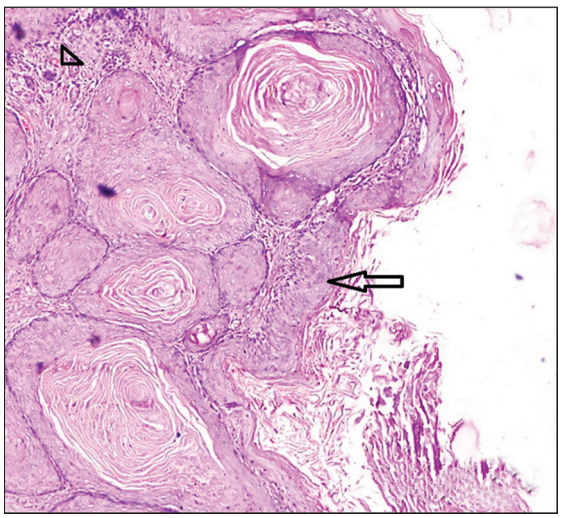

Figure 3: The lining epithelium of the epidermal cyst (arrow) replaced by malignant squamous epithelium. Note the invasive nests of tumor cells (arrow head). (H and E, ×100)

noted [Figure 3]. Final histopathological diagnosis was given as well-differentiated SCC arising in an EC.

Among the various types of cutaneous epithelial cysts, SCC has been reported to arise only in EC[4] About 16 cases of SCC arising in EC have been reported till date.[4] Even though head and neck region is the most common site for such an occurrence (56.3%), none of the earlier cases reported such lesion in submandibular area.[4] Other sites of occurrence reported are gluteal region (18.8%), thigh (12.5%) trunk (6.3%) and index finger (6.3%).[4] Reported rates of malignant transformation of an EC into cutaneous SCC range from 0.011-0.045%.[2] Generally, SCC occurring in ECs is of low malignant potential.[3] Local excision can be curative in cases detected earlier; more extensive surgery may be required for patients with larger and more advanced lesions.[5]

To conclude, not all inclusion cysts are routinely excised because of infrequent malignancy in these lesions. The diagnosis of SCC arising in an EC is made only when the presence of transition between EC wall and SCC proliferation is proved. Although SCC can occur in an EC rarely, pathologists should look carefully for such existence.

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