

Epidermal Cyst on the Lower Lip

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An epidermal cyst is the most common cutaneous cyst, and is the result of the proliferation of surface epidermal cells within the dermis. It is unusual that these cysts occur in mucosa, including an oral or perioral location. We report a patient with a labial epidermal cyst, which probably originated from adjacent hair follicles. We excised the tumor using an intraoral approach for better cosmetic result. This case is interesting, due to findings of a labial epidermal cyst resembling a mucocele or salivary gland tumor in morphology, and a connection finding of a cystic base with adjacent hairy skin, suggesting a subcutaneous infiltration of the cyst. (*Ann Dermatol (Seoul)* 19(3) 112~114, 2007)

Key Words: Epidermal cyst, Lip

INTRODUCTION

An epidermal cyst is the most common cutaneous cyst, and is the result of the proliferation of surface epidermal cells within the dermis. Epidermal cysts are most commonly found on the face, neck, chest, and upper back, where the sebaceous glands are most numerous and active. These lesions are well-demarcated dermal nodules, and may have a clinically-visible central punctum representing the follicle from which the cyst is derived¹. At this point, it is unusual event that these cysts occur in mucosa, including an oral or perioral location². In this report, we describe a patient with a labial epidermal cyst, which probably originated from the adjacent hair follicles.

CASE REPORT

A 31-year-old man presented with a 10-year history of a lump on the lower lip. He had been treated by incision and drainage at local clinics twice before visiting us, but the lesion had gradually

enlarged again in recent years. Otherwise he had no notable past or family history. Physical examination of the lower lip revealed a 3 × 3 cm-sized soft, palpable cystic mass (Fig. 1A). There was no sign of cervical lymphadenopathy. A punch biopsy was taken from the center of the lesion.

On histopathologic examination, the specimen showed keratin materials and numerous multinucleated, giant cells under the mucosal layer, representing a foreign body reaction. The wall of the cystic lesion was composed of several layers of squamous cells including a granular layer. These findings were consistent with those of an epidermal cyst. We planned complete excision of this lesion by an intraoral approach for postoperative cosmetic results. Intraoperative findings showed a well-demarcated cystic mass, and the base of the cyst was connected by a dermal portion of mentolabial fold below the lower lip (Fig. 1B, D). We completely excised the cyst with the connected portion of mentolabial skin gap (Fig. 1C, D), and histologically confirmed an epidermal cyst (Fig. 2). No evidence of recurrence was observed for one year.

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DISCUSSION

Epidermal cysts have been sparsely reported in oral or perioral locations. To our knowledge, only 4 cases of labial epidermal cysts, two on the upper lip and two on the lower lip, have been reported on PubMed³⁻⁶, and there have been no reported case



Fig. 1. (A) A 3 × 3 cm-sized soft, palpable cystic mass on the lower lip. (B) Intraoperative findings of an intraoral approach showing connection of cystic wall with the dermal portion of the mentolabial fold below the lower lip. (C) Postoperative finding after complete excision. (D) Partially-excised skin on the mentolabial fold after removing the connected cystic wall completely.

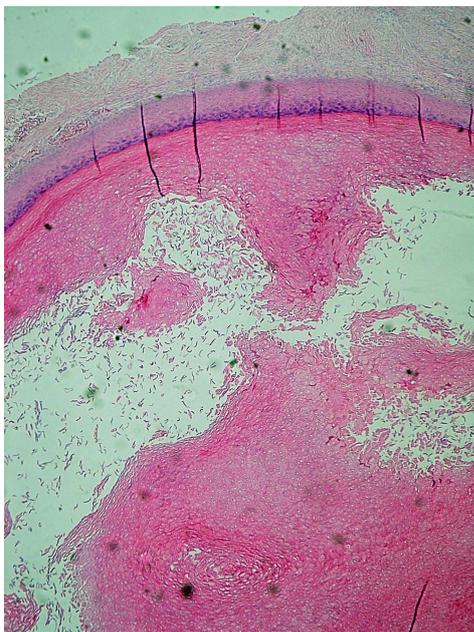


Fig. 2. The excised cyst demonstrated that is lined by stratified squamous epithelium with a granular layer and is filled with laminated keratin (H & E, × 100).

in the Korean dermatologic literature. The mechanism of these cysts on the oral mucosa can be explained in three ways. First, displaced epithelial aggregation can occur secondary to trauma. This is

called an ‘implantation phenomenon’, and this implanted cell may then proliferate and develop a cystic formation. Second, as some reports for intraoral hair show⁷⁻⁹, aberrant pilar differentiation of mucosal keratinocytes could be considered a hypothetical avenue of pathogenesis¹⁰. Finally, as in this case, epithelial proliferation of adjacent hair follicle origin cells can infiltrate the mucosal skin area through subcutaneous tissue. When we dissected for separation of the cyst from adjacent tissue, the cystic wall was connected with the epidermal portion of the mentolabial fold. This finding may be strong evidence that the labial cyst originated from adjacent mentolabial skin.

The excision of any benign subcutaneous cyst takes into account the potential risk of postsurgical scarring. Thus, a mucosal intraoral approach, like in our case, is an alternative to percutaneous excision to remove a cyst. The intraoral approach method may avoid a visible scar on the overlying skin. However, when the cyst is located between the skin and underlying muscles, caution must be taken to avoid damage to surrounding muscles, arteries, and nerves¹¹.

Our case is interesting, as the findings of a labial epidermal cyst resembling mucocele or a salivary gland tumor in morphology, and the connection finding of a cystic base with adjacent hairy skin, suggested subcutaneous infiltration of the cyst.

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