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Aesthetic refinement through intraoral excision: A Minimally Invasive Approach To Epidermoid Cyst Removal, A Case Report

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ABSTRACT

Background

Epidermoid cysts, also known as epidermal inclusion cysts, are benign, slow-growing lesions that often develop in the dermis. They arise from the hair follicles and are most commonly filled with keratinous material. Epidermoid cysts can occur anywhere on the body but are most often seen on the face, neck, and upper trunk. These cysts can vary in size and often present as small, firm, mobile, and non-tender nodules. Although usually asymptomatic, they can become infected or inflamed, causing pain and swelling [1].

Case Presentation

This report presents a case of a 58 years old male patient with a cystic lesion in his right corner of mouth. The patient presented with a complaint of a painless, slowly enlarging nodule in the right side of the corner of the mouth. The lesion had been present for approximately 6 months, with gradual enlargement over time. The patient reported no associated symptoms, such as pain or discharge. Enucleation and excisional biopsy were carried out intraorally to avoid post-operative facial scarring. The specimen was sent to histopathology laboratory for evaluation, which suggested a confirm diagnosis of Epidermoid cyst.

Conclusion

Although Epidermoid cysts do not tend to recur, the need for regular follow-ups should not be underestimated, neither by the attending clinician nor by the patients themselves. In conclusion, the histopathologically proven and uneventful wound healing constitutes the only reassurance for the patient's well-being.

Keywords: Aesthertic,intraoral excision,epidermoid cyst.

1. INTRODUCTION

An epidermoid cyst, also known as an epidermal inclusion cyst, is a common benign growth that originates in the outer layer of the skin, specifically from the hair follicles or sebaceous glands. It is typically a slow-growing, round, firm, and often painless lump that can develop anywhere on the body, but it is most commonly found on the face, neck, back, and scalp. It is usually caused by the blockage of hair follicles or sebaceous glands, leading to the accumulation of keratin and other debris under the skin. This results in the formation of a cyst. The cyst typically presents as a painless, round lump beneath the skin. It may feel firm or rubbery to the touch and is mobile. The overlying skin appears normal and often has no redness or irritation, unless infected. The cyst may range in size from a small pea to several centimeters in diameter. In some cases, the cyst may become inflamed or infected, leading to pain, redness, warmth, or the presence of a pus-like discharge. The diagnosis is usually made through a physical exam based on the cyst's characteristic appearance and location. In some cases, further diagnostic steps may include Computed Tomography, Ultrasound and Biopsy. Conservative management can be done if the cyst is asymptomatic and not causing any discomfort, it may simply be observed over time. Warm compresses can sometimes help reduce inflammation if the cyst is mildly irritated. The most common treatment for symptomatic or troublesome epidermoid cysts is complete excision. Local anesthesia is typically used for minor excisions, and stitches are often applied for cosmetic purposes. Excision is preferred to prevent recurrence, as partial removal can lead to cyst recurrence. Epidermoid cysts are typically benign and have a good prognosis. Most people experience a one-time occurrence or infrequent recurrence after proper excision. They rarely develop into skin cancer, making them non-threatening in most cases.

2. CASE PRESENTATION

A 58 years old male patient presented with a cystic lesion in his right corner of mouth. The patient appeared with a complaint of a painless, slowly enlarging nodule in the right side of the corner of the mouth. The lesion had been present for approximately 6 months, with gradual enlargement over time. The patient reported no associated symptoms, such as pain or discharge. There was no significant medical history and was not taking any medications. The patient had no family history of similar skin lesions. On physical examination, a firm, round, mobile nodule, approximately 1cm in diameter, was noted on the right side of the corner of the mouth. The overlying skin appeared normal with no erythema, warmth, or drainage. Palpation revealed a well-defined, smooth surface, and there was no fluctuation or pulsation to suggest an abscess or vascular lesion. The rest of the physical examination, including lymph nodes, was unremarkable.

Based on the clinical examination and characteristic presentation, the most likely diagnosis was an epidermoid cyst. Further diagnostic investigations were not deemed necessary, as the lesion was consistent with typical clinical features. However, if the cyst had been infected or presented with unusual features (e.g., rapid growth, tenderness, or drainage), an ultrasound or biopsy pre-operatively could have been considered to rule out other potential diagnoses. After discussing the potential for recurrence and the patient's preference for complete removal, surgical excision was performed under local anaesthesia.

The procedure involved a small incision over the cyst, followed by complete excision of the cyst wall and contents. The wound was closed with simple interrupted sutures, and the patient was instructed to follow up in 1 week for suture removal.

Fig 1: Exposed epidermoid cyst intraorally

Fig 2 : Final delivery of cyst

The excised cyst was sent for histopathological examination, which confirmed the diagnosis of an epidermoid cyst. The specimen revealed the cystic epithelium underlying connective tissue wall. The cystic epithelium is 2-4 cell layer thick showing prominent granular cell layer and keratin lamellae. The lumen is composed of scattered keratin flakes with mural proliferation. The connective tissue wall consists of loose collagen fibres with fibroblasts.

Fig 3 : Complete excision of cyst

The patient experienced an uneventful recovery following the procedure. He reported no recurrence of symptoms, and follow-up examination at 1 week revealed no signs of infection or complications. The wound had healed well with minimal scarring, and the patient was satisfied with the cosmetic outcome.

3. DISCUSSION

Epidermoid cysts are the most common type of cutaneous cysts. They arise from the outer layer of the skin and are typically filled with keratin debris. These cysts are benign and slow-growing, but they can occasionally become infected, causing pain, redness, and swelling. The exact cause of epidermoid cysts is not always clear, though they may result from trauma, blockage of hair follicles, or an abnormality in the sebaceous glands.

Epidermoid cysts are generally common to occur in the scalp, face, neck and trunk region [2]. But as supported by a thorough review of both recent and older literature, epidermoid cysts in head and neck seems less common, constituting about 1.6-6.9% of all cases in the body [3]. In one retrospective study among 89 children, only 13.33% cases of head cysts were found to be epidermoid, compared to 58.88% of dermoid cysts [4]. Only 7% of all the epidermoid and dermoid cysts are found to occur in the head and neck area [5,6], 1.6% in oral cavity and constitutes only 0.01% of all the oral cysts [6-8]. Out of 1495 cases of dermoid cysts seen in New and Erich at the Mayo Clinic, only 24 were seen intra-orally, in the floor of the mouth [9]. On another study, out of 191 children treated for congenital cysts and fistula in the neck (excluding cystic hygroma and peri-auricular fistulas), only 21 were diagnosed as dermoid cyst [10]. Epidermoid cyst in the floor of the mouth is rare. Dermoid and epidermoid cyst constitute less than 0.01% of all intra-oral cyst. General consensus regarding the embryologic explanation of midline epidermoid cyst in the floor of the mouth is that there is entrapment of epithelial cell rests during the fusion of the 2nd and 3rd branchial arches [2]. Alternatively, it may be a result of ectodermal differentiation of multipotent cells that has been pinched off during anterior neuropore closure [7]. These kinds of cysts mostly remain asymptomatic and unreported until it gets to a size large enough to cause mechanical symptoms [7].

The clinical diagnosis of an epidermoid cyst is usually straightforward, based on the lesion's typical appearance and location. However, differential diagnoses may include sebaceous cysts, dermoid cysts, and lipomas, among others. In cases of infection or inflammation, antibiotics or drainage may be required, although surgical excision remains the definitive treatment.

Surgical excision is the preferred treatment for symptomatic or bothersome epidermoid cysts, as it eliminates the cyst and reduces the risk of recurrence. Conservative management, including observation or warm compresses, may be appropriate for asymptomatic cysts. However, excision is recommended if there is a risk of infection, the cyst is causing cosmetic concerns, or there is a history of recurrence.

4. CONCLUSION

Epidermoid cysts are common benign lesions that can be managed effectively through surgical excision. Early diagnosis and treatment are essential to prevent complications such as infection or recurrence. Although excisional biopsy is the golden standard by which we distinguish such lesions, it should not be taken solely and indiscriminately into account. This case highlights the importance of clinical examination and patient preference in managing cutaneous cysts, with surgical excision

being the most effective approach for complete removal and prevention of recurrence.

Conflict of interest

None

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