

Excision of sebaceous cyst by intraoral approach

A case report

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Abstract

Rationale: Surgical removal of a sebaceous cyst is usually accomplished through an external incision, which inevitably results in a scar. Herein, we described an intraoral approach for excising sebaceous cysts located in the lip or cheek near lip commissure, to avoid a skin scar.

Patient concerns: Removal of the cyst but without leaving a scar on the face.

Diagnoses: Six patients were diagnosed with a subcutaneous cyst located in the lip or cheek near lip commissure.

Interventions: We implemented an intraoral approach to excise the cyst, wherein an intraoral incision was made and blunt dissection was performed through the buccinator muscle or orbicularis oris muscle until the cyst wall was seen. The cyst was then dissected from the surrounding subcutaneous tissue by careful blunt dissection with a hemostat and completely removed through the intraoral incision.

Outcomes: All patients had complete recovery, with no recurrence or complaints for at least 6 months after the surgery.

Lessons: A sebaceous cyst located in the lip or cheek near lip commissure can be excised by an intraoral approach through the mouth, which avoids a visible scar on the skin.

Keywords: blunt dissection, intraoral, scar, sebaceous cyst

1. Introduction

Sebaceous cysts are common on the face and often arise from duct obstruction of a sebaceous gland in the hair follicle. They always result in a black comedo on the skin surface.^[1,2] Surgery is the only treatment for sebaceous cysts, and the goal is to completely remove the cyst in order to prevent recurrence and achieve the best cosmetic result, which means less or no scar on the skin.^[3]

Surgical treatment includes a simple excision through a skin incision along the maximum skin tension lines (inevitably results in a scar), or a small incision into the cyst to release its contents (carries a risk of recurrence), or an endoscopic-assisted resection with an incision in an inconspicuous location (needs endoscopic equipment and has risk of nerve/muscle injury).^[4–7]

For sebaceous cysts located in the lip or cheek near lip commissure, skin scars can be avoided by removing the cyst through an oral incision. Herein, we described 6 patients with sebaceous cysts located in the lip or cheek near lip commissure to evaluate the outcome of the intraoral approach that was used in excising the cyst under the skin.

2. Methods

This is a retrospective study of 6 patients with sebaceous cysts located in the lip or cheek near lip commissure treated between January 2015 and January 2016 at the plastic surgery department of China Japan Friendship Hospital. This study was approved by the Ethic Committee of China Japan Friendship Hospital, and all patients provided signed informed consent. Inclusion criteria were non-inflamed and freely movable cysts located in the lip or cheek near lip commissure. Exclusion criteria were cysts complicated by rupture, recurrence, inflammation, or infection, and patients with an obvious “pore” on the skin. All patients were evaluated thorough medical history taking, and clinical exam to assess the site, size, and shape of the cyst. Clinical data are shown in Table 1.

The surgery was conducted with the patient in supine position. The tissue surrounding the cyst and the mucosa underlying the cyst was anesthetized with 1% lidocaine. If there was a skin punctum overlying the cyst, we infiltrated 1% lidocaine into the skin punctum to separate the skin from the cyst, which can lessen the possibility of skin perforation during a dissection procedure, caution was taken to avoid puncturing the cyst by needle when infiltrating with lidocaine. Incision was made through the mucosa on the superior portion of the cyst. Careful blunt dissection was performed by scissors through submucosal tissue and muscle (buccinator muscle or orbicularis oris) fibers. Then the cyst wall was visible and a hemostat was used to bluntly dissect the cyst from the surrounding subcutaneous tissue throughout the whole process to avoid damage to muscles, arteries, and nerves (Fig. 1A). Simultaneously, the cyst was jacked with the other hand on the skin surface to provide better visibility, and was completely removed through the mucosal incision. Then the wounds were washed with 0.9% NaCl solution to clean the fields. The incision was closed with submucosal and permucosal sutures. Oral antibiotics were prescribed for 3 days and the permucosal sutures were removed 1 week post operation.

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Table 1**Clinical data of 6 patients with sebaceous cysts.**

Patient no.	Age/gender	Location	Diameter, cm	Punctum	Muscle/nerve injury	Follow-up, mo	Recurrence
1	38/M	Lower lip	0.7	No	No	6	No
2	22/F	Lower lip	1.0	No	No	7	No
3	23/F	Upper lip	0.8	No	No	8	No
4	24/F	Left cheek	1.2	Yes	No	14	No
5	22/F	Left cheek	0.6	No	No	7	No
6	46/M	Right cheek	1.8	Yes	No	12	No

3. Results

Four female and 2 male patients were included in our study, with the age range from 22 to 46 years (mean: 29 years). Three cysts were located in the cheek near lip commissure (Fig. 1B), 2 were in the lower lip, and 1 in the upper lip. Two cysts had a punctum on the skin while 4 did not. Complete excision was achieved in all patients without rupture of the cyst. The cysts were round with 0.6 to 1.8 cm in diameter (mean: 1 cm). The cyst walls were white and contained whitish rancid-smelling keratinous substance. The patients were followed up for at least 6 months after surgery. No recurrence of the cyst or postoperative wound infection or muscle/nerve injury occurred. There was no scar or pigmentation on the skin (Fig. 1C).

4. Discussion

Sebaceous cysts are benign lesions of the skin, which often arise from duct obstruction of a sebaceous gland. Other causes include a developmental defect of the sebaceous duct or traumatic implantation of surface epithelium beneath the skin.^[8] The cysts can be clinically diagnosed as roughly circular subcutaneous nodules of a firm consistency, covered by smooth normal-colored skin with a central punctum. The punctum and pore corresponding to the follicle from which the cyst originated, is an important diagnostic clue.^[9]

Surgery is the only treatment for sebaceous cysts, and its goal is to completely remove the cyst to prevent recurrence and achieve the best cosmetic result. A conventional wide excision results in a potentially long scar. The minimal excision technique can achieve minimal scarring but carries a risk of recurrence. Mehrabi et al reported that the risk of cyst recurrence was 5% to 10%,^[10] while Im et al reported that the risk of cyst recurrence was 8.3% after endoscopic excision and 2.2% after direct excision with a 56-month mean follow-up period.^[11] For sebaceous cysts located

in the lip or cheek near lip commissure, skin scar can be avoided by removing the cyst through an oral incision.

The use of intraoral incisions for removing facial cysts has been previously reported. An intraoral approach for removal of a cheek epidermoid cyst has been described by Rajayogeswaran in 1989.^[12] Bauer reported the successful intraoral excision of a cheek cystic hygroma in a 16-month-old girl.^[13] In our study, the cysts occurred between the skin and the underlying muscles, and caution was needed to avoid damage to surrounding muscles, arteries, and nerves. Hence, we bluntly dissected the cyst from the surrounding subcutaneous tissue throughout the whole process. In addition, if there was a skin punctum overlying the cyst, we infiltrated local anesthesia drugs into the skin punctum to separate the skin from the cyst, which can lessen the possibility of skin perforation during a dissection procedure. No muscle or nerve injury was noticed during the follow-up period in this series because of careful blunt dissection throughout the surgical process.

To prevent recurrence, the cyst was completely removed after careful anesthesia injection to avoid cyst puncture. Bluntly dissected throughout the whole process to avoid cyst rupture, the cyst was completely removed. No recurrence was noted in our series. Since the cysts were completely removed in an intact condition, we simply cleaned the wounds with 0.9% NaCl solution and there was no postoperative wound infection in our study.

5. Conclusion

Excision of sebaceous cyst located in the lip or cheek near lip commissure by intraoral approach is an efficient method for the treatment of such cysts. With careful blunt dissection, this approach allows for safe removal of the sebaceous cyst without unwanted skin scar.



Figure 1. A typical case. (A) The round cyst 0.8 cm in diameter was completely freed from the surrounding subcutaneous tissue by careful blunt dissection. (B) Preoperative view of the cyst in the left cheek of a 24-y-old female patient. (C) There was no scar on the skin in the same patient at 2 mo post operation.

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