

A unique case of a postrhinoplasty epidermoid cyst*

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SUMMARY

The first case of a postrhinoplasty cyst lined with unusual stratified squamous epithelium, unlike the other published mucous ones, is described in this article. There are two different theories accounting for this complication: namely mucosal herniation and the free graft theory. Although the cyst was very close to the marginal rim incision, there was no connection between the cyst and vestibular skin. Thus the free graft theory is more logical than the herniation theory to explain the development of this cyst.

Key words: postrhinoplasty, cyst, mucous, epidermoid, complication

INTRODUCTION

Postrhinoplasty mucous cysts are a considerably rare complication. They present with swellings, but sometimes there is no finding. All of the postrhinoplasty cyst cases in the literature are mucous cysts⁽¹⁻¹²⁾. To the best of our knowledge, this is the first case of an epidermoid postrhinoplasty cyst at the tip of the nose.

CASE REPORT

A 25-year old female patient was referred to our out-patient clinic with impaired nasal breathing function and swelling at the nasal tip. She had undergone a septoplasty in 2001 which resulted in a saddle nose deformity, and she had undergone an open technique rhinoplasty elsewhere in 2004. A year after her second surgery, she noticed a swelling on the left side of the tip. Within six months it reached the size of a pea (Figure 1).

On examination, besides functional and aesthetic problems, a small immobile, painless, smooth subcutaneous mass palpated at the left side of the tip. Revision rhinoplasty with costal cartilage graft was planned due to inadequate septal cartilage remnants. During the surgery we encountered a 10 x 7 x 5 mm cystic mass which had a hairy content over the left alar cartilage (Figure 2). The pathologic examination of the mass reported it as an epidermoid cyst (Figure 3).

The patient had a good functional postoperative result with no further complications or signs of recurrence during a postoperative follow-up period of two years (Figure 4).

DISCUSSION

Postrhinoplasty cysts are very rare complications of rhinoplasty. Starting with Mc Gregor's first report⁽¹⁾, there are only 12 published cases of a postrhinoplasty cyst in the literature⁽¹⁻¹²⁾.

All of them were of mucous nature. At first, mucousal herniation through the osteotomy line was considered the cause of this complication⁽¹⁾. Later, Mouly⁽²⁾ suggested that these cysts were caused by entrapment of nasal mucosa in an ectopic position which functioned as a free mucosal graft. Lateral osteotomies had been implicated as carriers of mucousa fragments and Mouly suggested that they should be performed in extramucosal fashion. Other authors supported this theory^(4,10). Kotzur⁽¹⁰⁾ reported a postrhinoplasty cyst attached to parts of crushed cartilage. In addition, in support of the free mucosal

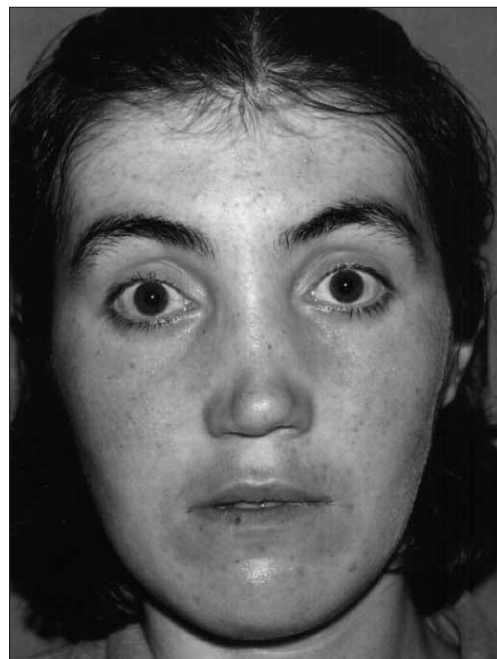


Figure 1. A 25 year-old woman with swelling in left side of the tip appearing one and a half years after her initial surgery.

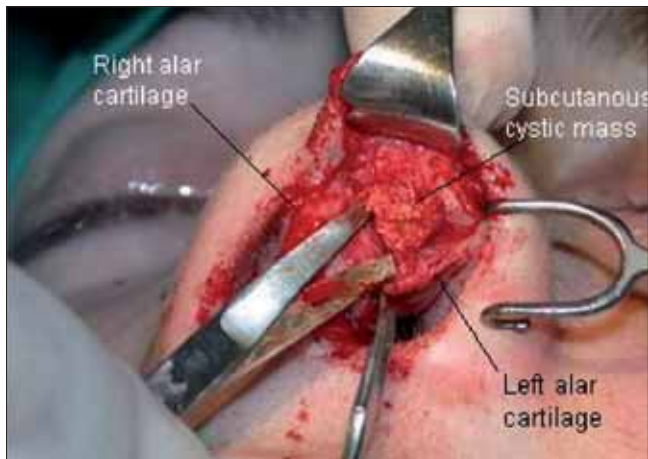


Figure 2. Intraoperative view: 10 x 7 x 5 mm cystic mass which has hairy content over the left alar cartilage.

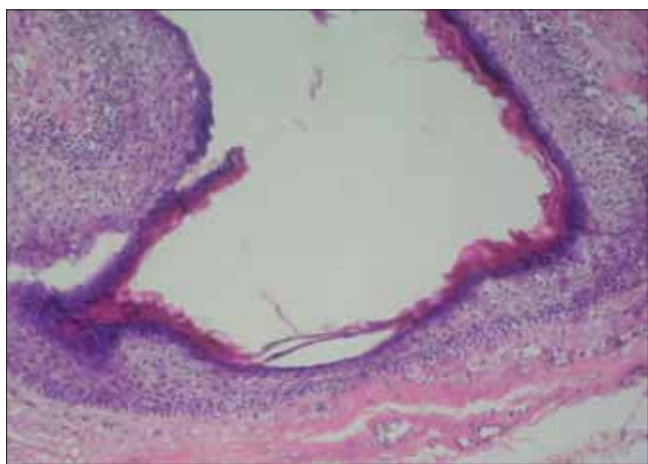


Figure 3. Microscopic view: Nasal tip cyst is lined by stratified squamous epithelium. (Hematoxylin-eosin x200).

graft theory, two cases of respiratory implantation cyst of the mandible after chin augmentation with nasal osteocartilaginous graft were reported⁽¹⁵⁻¹⁶⁾. Gryskiewich⁽¹³⁾ put forth the argument that these cysts may arise from petroleum-based ointments because pathologic examination of his two cases revealed inflammation without cyst elements with a paraffinoma. However, some authors regarded paraffinoma as a different phenomenon⁽¹⁰⁻¹⁴⁾.

Generally these cysts occur over the nasal bone along the line of nasal osteotomy^(4,6,9,10). Two cases were reported parasally along the maxillary osteotomy^(11,17). Our case was one of four cysts located over alar cartilage in a subcutaneous tissue position^(4,9,10).

As this was the first postrhinoplasty epidermoid cyst of the nose, in consideration of the closeness to the marginal rim incision, it could be postulated that it may have been caused by the entrapment of vestibular skin in the operation field. However, we could not find any connection between the cyst

and vestibular skin. Thus, the free graft theory seems more logical as an explanation than the herniation theory.

Postsurgical implantation epidermoid cysts rarely occur in areas other than nose. Stylet-less myelogram needles have been implicated as the cause of many of these complications⁽¹⁸⁾. It is thought that stylet-less needles cause epidermoid cysts by carrying epithelial fragments to the subepithelial area. In a case reported by Low et al.⁽¹⁹⁾, an epidermoid cyst developed after carpal tunnel surgery. The authors stated that this may have been caused by skin fragments carried by polyglacting suture to subepithelial tissues. In the literature, 2 intraabdominal epidermoid cysts developing after appendectomy have been reported^(20,21).

To prevent this complication, many authors emphasized the importance of clearing all mucousal, bone and cartilage remnants^(4,6,9). We also recommend careful closure of the incisions and to avoid seeding of mucous or squamous remnants in the subcutaneous-submucousal raw surface.

In our opinion it would be more appropriate to call this complication “postrhinoplasty cyst” rather than “postrhinoplasty mucous cyst”.

REFERENCES

1. McGregor MW, O'Connor GB, Saffier S. Complications of rhinoplasty, skin and subcutaneous tissues. *J Int Coll Surg.* 1958; 51: 179-184.
2. Mouly R. Le kyste mucoide, complication inhabituelle de la rhinoplastie. *Ann Chir Plast.* 1970; 15: 153-155.
3. Senechal G, Senechal B, Mamelle G. Une complication rare e tardive des rhinoplasties. *Ann Oto-Laryng (Paris)* 1981; 98: 385-386.
4. Shulman Y, Westreich M. Postrhinoplasty mucous cyst of the nose. *Plast Reconstr Surg.* 1983; 71: 421-422.
5. Lawson W, Kessler S, Biller HF. Unusual and fatal complications of rhinoplasty. *Arch Otolaryngol Head Neck Surg.* 1983; 109: 164-169.
6. Harley EH, Erdman JP. Dorsal nasal cyst formation. *Arch Otolaryngol Head Neck Surg.* 1990; 116: 105-106.



Figure 4. Postoperative view 2 years after revision septorhinoplasty.

7. Toriumi DM, Calvin CM. Revision rhinoplasty: case study. In: D.M. Toriumi and C.M. Calvin, Editors, Open structure rhinoplasty, WB Saunders, Philadelphia, PA, USA 1990: 464-469.
8. Zijlker TD, Vuyk HD. Nasal dorsal cyst after rhinoplasty. *Rhinology* 1993; 31: 89-91.
9. Flaerty G, Pestalardo CM, Itturalde JG, et al. Mucous cyst: postrhinoplasty complications. *Aesthetic Plast Surg.* 1996; 20: 29-31.
10. Kotzur A, Gubisch W. Mucous cyst - A postrhinoplasty complication: outcome and prevention. *Plast Reconstr Surg.* 1997; 100: 520-524.
11. Karapantzios I, Behrmann R, Simaskos N. Paranasal mucous cyst: a rare finding following septorhinoplasty. *Rhinology* 1999; 37: 190-191.
12. Dini M, Innocenti A, Lo Russo G, et al. Postrhinoplasty mucous cyst of the nose. *Plast Reconstr Surg.* 2001; 107: 885-886.
13. Gryskiewicz J. Paraffinoma or postrhinoplasty mucous cyst of the nose: Which is it? *Plast Reconstr Surg.* 2001; 108: 2160-2161.
14. Bracaqlia R, Fortunato R, Gentileschi S. Endoscopic excision for postrhinoplasty mucous cyst of the nose. *Br J Plast Surg.* 2005; 58: 271-274.
15. Imholte M, Schwartz HC. Respiratory implantation cyst of the mandible after chin augmentation: report of case. *Otolaryngol-Head Neck Surg.* 2001; 124: 586-587.
16. Anastassov GE, Lee H. Respiratory mucocele formation after augmentation genioplasty with nasal osteocartilagenous graft. *J Oral Maxillofac Surg.* 1999; 57: 1263-1265.
17. Raine C, Williamson SC, McLean NR. Mucous cyst of alar base: A rare complication following rhinoplasty. *Br J Plast Surg.* 2003; 56: 176-177.
18. Park JC, Chung CK, Kim HJ. Iatrogenic spinal epidermoid tumor. A complication of spinal puncture in an adult. *Clin Neurol Neurosurg* 2003; 105: 281-285.
19. Low HLM, Sivasamy VP, Griffiths AP. Recurrent carpal tunnel syndrome owing to an implantation epidermoid cyst after carpal tunnel decompression: case report. *Neurosurgery* 60: E956.
20. Pearl BL, Wolff N. Epidermoid cyst of the cecum. *JAMA* 1969; 207 :1516-1517.
21. Pan A, Rogers AG, Klass AA. Epidermoid cyst of the cecum. *Can Med Assoc J* 1961; 84: 1075.

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