

Nasoseptal flap reconstruction after oropharyngeal cancer resection

A case report

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Abstract

Rationale: The nasoseptal flap has been widely used to reconstruct skull base defects with excellent success rates. Recently, there were several attempts to use this flap for other defects. Patient concerns: We present the case of the nasoseptal flap reconstruction after oropharyngeal cancer resection.

Diagnosis: The diagnosis of this patient was oropharyngeal T3 squamous cell carcinoma.

Interventions: The surgical resection included the right radical tonsillectomy, uvular, and part of the soft palate and hard palate. The nasoseptal flap was sutured to the oropharyngeal defect.

Outcomes: In spite of the radiation therapy, the nasoseptal flap was well healed to the oropharyngeal defect.

Lessons: We suggest that the nasoseptal flap may be a feasible reconstruction option for oropharyngeal defect after oropharyngeal cancer resection.

Keywords: nasal septum, oropharyngeal neoplasms, reconstructive surgical procedures, surgical flap

1. Introduction

The nasoseptal flap has been widely used to reconstruct skull base defects with excellent success rates.^[1–4] Recently, the nasoseptal flap has been used to repair velopharyngeal insufficiency, orotracheal fistula, and to reconstruct oropharyngeal defects.^[2–4] Herein, we present a case of nasoseptal flap reconstruction after oropharyngeal cancer resection.

2. Case report

A 78-year-old man presented with complaints of oral discomfort that were detected 6 months prior. On physical examination, a 5 × 4 cm sized, whitish firm mass was noted in the right tonsillar fossa, soft palate, and part of the hard palate (Fig. 1). A punch biopsy showed squamous cell carcinoma. A computed tomogra-

phy scan revealed a suspicious metastatic lymph node in right neck. However, there was no distant metastasis.

The patient underwent surgical resection for oropharyngeal T3 squamous cell carcinoma. The surgical resection included the right radical tonsillectomy, uvular, part of the soft palate and hard palate, and right modified radical neck dissection (Fig. 2). The oropharyngeal defect was large and exposed to the parapharyngeal fat pad. For reconstruction of the oropharyngeal defect, the nasoseptal flap of the right nasal cavity was harvested and transposed into the nasopharynx and oropharynx (Fig. 2). The nasoseptal flap was sutured to the oropharyngeal defect (Fig. 3). Oral feeding was started at 11 days postoperatively. The patient underwent postoperative radiation therapy (6600 cGy). In spite of the radiation therapy, the nasoseptal flap was well healed to the oropharyngeal defect (Fig. 4). At 10 months postoperatively, the patient is doing well without complaints. There is no evidence of recurrence in computed tomography scans (Fig. 5). This study was approved by the institutional review board of the Chonnam National University Hwasun Hospital.

3. Discussion

Since the introduction of the nasoseptal flap technique in 2006, it has been widely adopted in endoscopic skull base surgery.^[1] The nasoseptal flap has been shown to be reliable and versatile flap for the reconstruction of skull base defects.^[1–4] Recently, there were several attempts to use this flap for other purposes, such as velopharyngeal insufficiency, orotracheal fistula, and oropharyngeal defect. The use of nasoseptal flap for other defects has shown good results.^[2–4]

In this study, we tried to reconstruct the oropharyngeal defect by using the nasoseptal flap. The nasoseptal flap was enough to cover the soft palate, parapharyngeal fat pad, and part of the hard palate. In addition, the flap was strong enough to endure radiation therapy.

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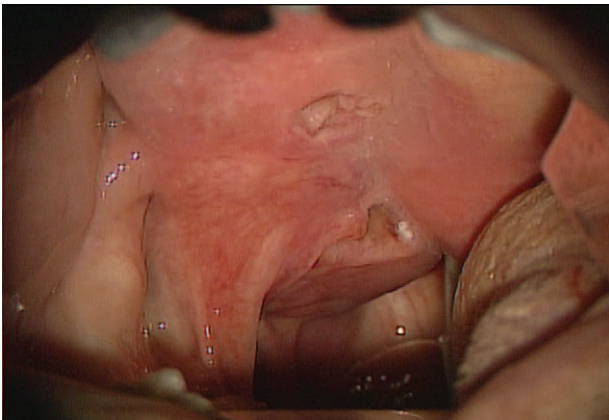


Figure 1. About 5 × 4 cm sized whitish firm mass is noted in the right tonsillar fossa, soft palate, and part of the hard palate.

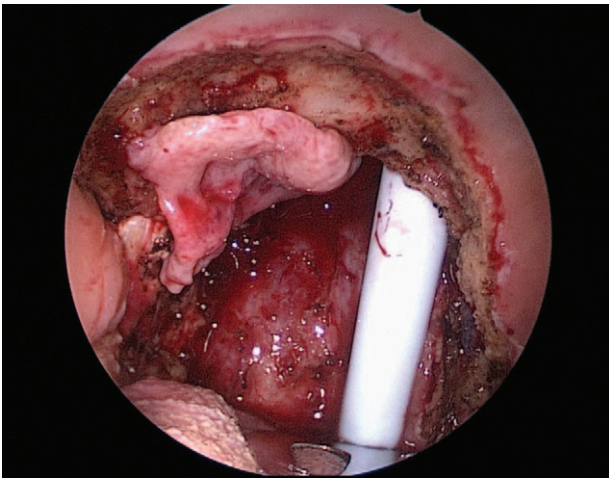


Figure 2. Oropharyngeal defect after right radical tonsillectomy, uvular, and part of the soft palate and hard palate.

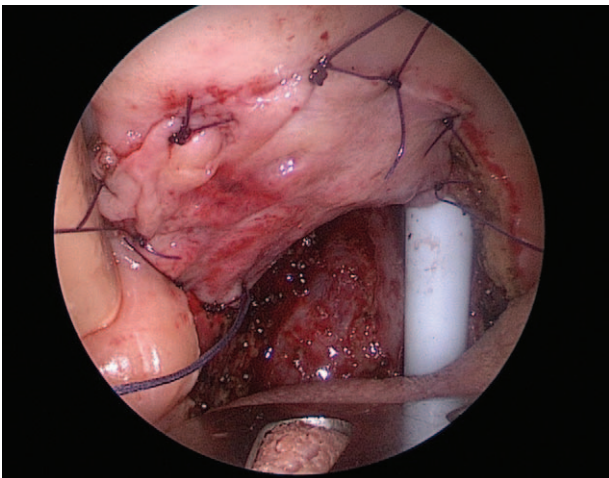


Figure 3. Nasoseptal flap is sutured to the oropharyngeal defect.

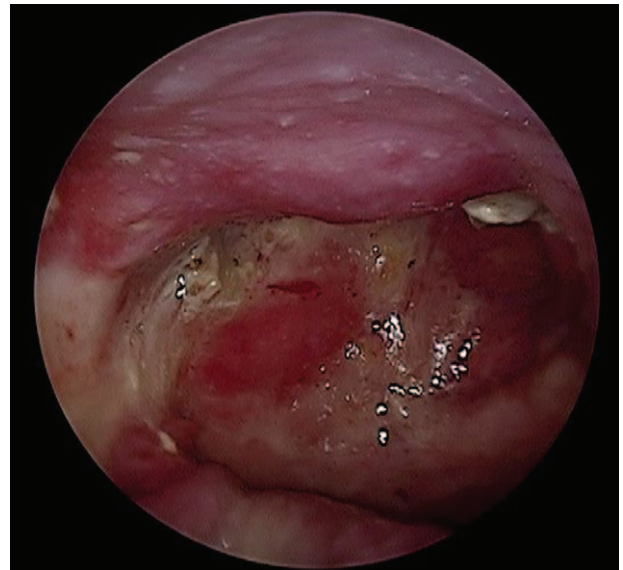


Figure 4. After the end of radiation therapy, nasoseptal flap is well healed to the oropharyngeal defect.

After radiation therapy, the nasoseptal flap showed no necrosis or dehiscence. In addition, the patient had no symptoms related to the nasoseptal flap, such as Eustachian tube dysfunction, nasal obstruction, or nasal regurgitation.

Nasoseptal flap reconstruction for oropharyngeal defect has several advantages. First, donor site morbidity is minimal. Transient nasal crusting presents until the nasal cavity mucosa healed.^[2,4] In addition, it takes an experienced surgeon about 20 minutes to harvest the nasoseptal flap.^[2] In this case, we also harvested the nasoseptal flap in 20 minutes. Therefore, this flap may be a useful reconstruction option for elderly or poor general condition patients. Second, the nasoseptal flap can be obtained in sufficient size for oropharyngeal defect reconstruction. If a large

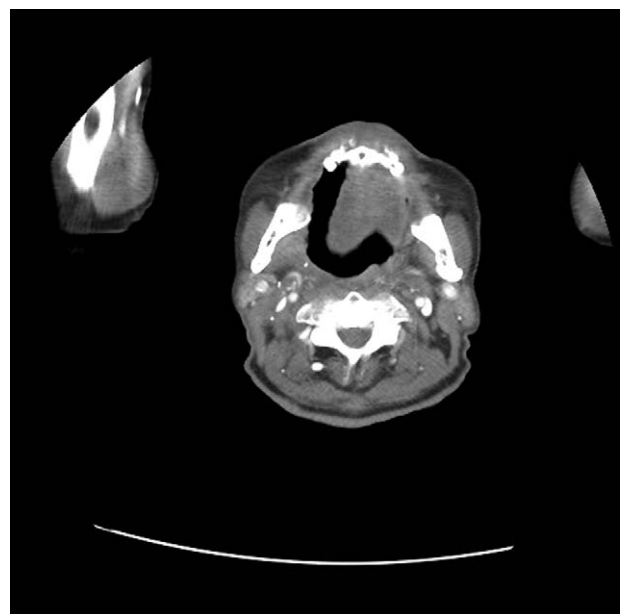


Figure 5. Computed tomography (CT) scan shows evidence of right oropharyngeal mass excision and right neck dissection without recurrent lesion.

nasoseptal flap is needed, the anterior incision should be started at most anterior nasal septum portion, or inferior incision at the inferior meatus.^[2,4] Third, the nasoseptal flap is a good vascularized pedicled flap on the posterior septal artery.^[1-4] Therefore, the flap can heal well, in spite of radiation therapy.

In conclusion, we suggest that the nasoseptal flap may be a feasible reconstruction option for oropharyngeal defect after oropharyngeal cancer resection. The nasoseptal flap has excellent coverage of the oropharyngeal defect with good success rates and minimal morbidity.

4. Summary

The nasoseptal flap has been widely used to reconstruct skull base defects with excellent success rates.

In spite of the radiation therapy, the nasoseptal flap was well healed to the oropharyngeal defect.

We suggest that the nasoseptal flap may be a feasible reconstruction option for oropharyngeal defect after oropharyngeal cancer resection.

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