

CASE REPORT

Closure of A Large Complicated Pharyngocutaneous Fistula

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ABSTRACT:

Pectoralis major muscle or myocutaneous flap is usually used for closure of big pharyngocutaneous fistula. In case of partial or complete failure, the plastic surgeon should be well prepared to use a second option for closure weather using myocutaneous or fasciocutaneous flaps, alone or with combination. Deepithelialized Deltopectoral flap found to be a reliable option.

INTRODUCTION:

After surgery for conditions such as laryngeal or hypopharyngeal cancer, pharyngocutaneous fistulas are sometimes troublesome complications such as salivary leakage, protracted difficulties in deglutition and delay in postoperative irradiation when indicated ⁽¹⁾. If conservative measures are unsuccessful within 2 weeks in a nonirradiated patient or 3 weeks in a radiated patient, operative closure should be considered. Although spontaneous closure may occur up to 6 weeks after onset, most patients prefer a more rapid resolution so that oral feeding may begin ⁽²⁾. In many patients, the pharyngeal defect may be in the anterior wall only, and attempts to close it by direct suturing invariably fail ⁽³⁾. Although a number of techniques have been described ^(1, 2, 4, 5, 6, 7) each of these procedures has drawbacks. Pedicled myocutaneous Flaps (mainly pectoralis major) and free flaps have become the standard treatment ⁽¹⁾. A successful free flap requires appropriate recipient vessels in the cervical region which may not be present in patients who have undergone prior radical resections. Some elderly patients may not be able to tolerate the longer operating times associated with these reconstructions ⁽⁴⁾. Pectoralis major myocutaneous flap, an island myocutaneous flap based on the pectoral branches of the thoracoacromial artery ⁽⁵⁾, is hardy, technically easy and quick to perform; it neither involves any complicated measurements nor requires special instruments making it very useful for a surgeon to use. The Deltopectoral flap is an axial flap first introduced by Bakamjian in 1965. Its vascularization is provided by the second, third and fourth perforating branches of the internal

mammary artery ^(8, 9, 10). It has long been the flap of choice for closure of large pharyngocutaneous fistulas. It provides well vascularized tissue from a donor site that lies outside the typical radiation fields used for head and neck cancer. However, it usually requires two reconstructive procedures and leaves major aesthetic sequelae ⁽⁹⁾. It has been used for a single stage reconstruction of a partial pharyngeal defect both as a lining and as a covering layer ⁽³⁾.

CASE REPORT:

70 years old patient was presented with large pharyngocutaneous fistula (20x5cm) following surgery for ca.larynx. The fistula was approximately 8x5 cm in the anterior wall of the pharynx. In addition; the surrounding skin was of poor quality because of the previous radiotherapy. Initially the patient had pectoralis major myocutaneous flap for closure of his fistula. Unfortunately, a dehiscence occur in one side due most probably to impaired healing by previous radiotherapy. The resultant fistula size was about 8x5 cm in diameter. A second attempt for closure was achieved with deepithelialized Deltopectoral flap which solved the patient's problem. A local turn over skin flap as lining and a Deltopectoral flap as cover. The intervening skin bridge was widely undermined, beneath which the Deltopectoral flap passed. An appropriate segment of the flap which passed beneath the skin bridge was deepithelialized to avoid a further separation stage. A split thickness skin graft was used to resurface the flap donor site. A nasogastric tube was maintained for 3 weeks postoperatively and after its removal a postoperative barium swallow showed free flow of the dye in the reconstructed part. The patient was given a clear liquid diet orally for a week after which he was maintained on a soft diet for one more week then he proceeded to a normal diet.

DISCUSSION:

Deepithelializing the Deltopectoral flap enable a one stage procedure for closing a large Pharyngocutaneous fistula as well as replacing the surrounding scared skin. This is a thin flap, unlike the pectoralis major flap; it does not interfere with the nearby tracheostomy tube. It is safe and relatively easy to perform.

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Fig.1: Old patient with big(20x5cm) Pharyngocutaneous fistula.



Fig.2:Planning of Pectoralis Major Myocutaneous flap



Fig.3: Removal of scared tissues.



Fig.4: Inset of Pectoralis Major flap with preservation of Deltopectoral flap.



Fig.5: Closing the flap donor site.



Fig.6:Pectoralis Major flap closing the fistula

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Fig.7: Pharyngocutaneous fistula(8x5cm) 6 months after partial pectoralis major MC flap necrosis.



Fig.8: Turn over skin flap as first layer lining.



Fig.9: Deepithelialized Deltopectoral flap.



Fig.10: Intervening skin bridge dissected as tunnel



Fig.11: Inset of the flap as a cover, donor site closed with split skin graft.



Fig.12: Fistula closed successfully, 6 months postoperative view.

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