Management of Pharyngocutaneous Fistula

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Abstract

Background: Early recognition of pharyngocutaneous fistula is critical in avoiding secondary wound complications and other more severe outcomes. Management of pharyngocutaneous fistula can take a conservative (secondary intention) or surgical pathway (primary intention) dependent on the size and severity of presentation.

Methods: This study included 34 patients who underwent total laryngectomy and developed pharyngocutaneous fistula (PCF) postoperatively, oral feeding was suspended and NG tube feeding was continued for a while to allow closure of the fistula. Control of wound infection was done by frequent dressing and give proper antibiotics according to culture and sensitivity test. If the fistula persists for 2 months, reconstructive procedures may be carried out with pectoralis major myocutaneous flap or any flap based on the preference of the surgeon and the circumstances surrounding the patient.

Results: In our study 28 patients (82.4%) the fistula was treated conservatively. 4 patients (11.7%) were treated by flaps (pectoralis major and deltopectoral), 3 patients (8.8%) were treated by pectoralis major myocutaneous flap and 1 patient (2.94%) was treated by deltopectoral flap.

Conclusion: Conservative management for PCF should continue for 8 weeks and if fistula persists so it should be closed surgically.

Key Words: Management – Postoperative – Cancer larynx – Complications – Pharyngocutaneous fistula.

Introduction

LARYNGECTOMY is now a very common operation in ENT department. Improvement in surgical skill, suture materials, early and timely surgical interventions, good postoperative care all have lead to improved surgical outcome with very low complication rate. Still we cannot avoid pharyngocutaneous fistula, which is one of the common complication after laryngectomy particularly in post radiotherapy patients [1]. PCF is a demoralizing complication not only for the surgeons involved but also for the patient and his family. On conservative management most of the salivary fistulas heal and the rest need surgical closure. Options are direct surgical repair in two layers, repair by local and distant flaps. The primary goal is to close the fistula without any tension [2].

Aim of the study:

To determine the possible management of the pharyngocutaneous fistula whether conservative or surgical if needed.

Material and Methods

This study was conducted on 34 patients admitted at the otolaryngology-head and neck surgery department, Kasr Al-Aini hospital, Cairo University suffering from PCF after total laryngectomy in the period from February 2014 till October 2015.

Oral feeding is suspended and NG tube feeding is continued for a while to allow closure of the fistula. Control of wound infection was done by frequent dressing and give proper antibiotics according to culture and sensitivity test. We try to improve all factors that promote healing of the wound by proper control of diabetes mellitus if the patient is diabetic, correction of anemia, improvement of the albumin level if the patient has post operative hypoalbuminemia and monitoring of liver function tests if the patients was known to have hepatic disease prior to surgery.

If the fistula persists for 2 months, reconstructive procedures may be carried out with pectoralis major myocutaneous flap or any flap based on the preference of the surgeon and the circumstances surrounding the patient.

A long time is often needed to control local infection and at least 8 weeks should be allowed for a fistula to close spontaneously. If the fistula at that time is stable and established, it is often to be closed surgically. Direct suturing of a fistula can be applied when it is small and where local
conditions dictate that there is enough lax tissue, however if this is not applicable, axial cutaneous flaps or myocutaneous flaps should be used.

In this study we divided the fistula into early fistula which occurred in the first 30 days postoperative and late fistula which occurred after 30 day.

**Results**

This study included 2 females and 32 males. The age of our patients range from 33 to 88 years old and the mean age was 58.9. In our study 26 patients developed fistula around the tracheostomy, 6 patients in the limb of the wound and 2 patients at the drain site. In our study 34 patients had pharyngocutaneous fistula, 32 patients (94%) had early fistula, 2 patients (6%) had late fistula and only 2 patients had evidence of recurrence. One patient had persistent fistula which appeared on the fifth day and resist conservative management then biopsy was taken which revealed evidence of malignancy and the other patient had late fistula.

In our study 28 patients (82.4%) the fistula was treated conservatively, 4 patients (11.7%) were treated by flaps (pectoralis major and deltopectoral), 3 patients (8.8%) were treated by pectoralis major myocutaneous flap and 1 patient (2.9%) was treated by deltopectoral flap and 2 patients (5.9%) had evidence of recurrence as shown in Table (1) and Fig. (1).

**Time needed for closure of the fistula by conservative management:**

Out of 28 cases of PCF treated conservatively 1 week was needed for closure of fistula in 4 patients (11.8%), 2 weeks were needed for closure of fistula in 10 patients (29.4%), 3 weeks were needed for closure of fistula in 6 patients (17.7%), 4 weeks were needed for closure of fistula in 2 patients (5.9%), 5 weeks were needed for closure of fistula in 2 patients (5.9%), 6 weeks were needed for closure of fistula in 2 patients (5.9%), 7 weeks were needed for closure of fistula in 1 patient (2.9%) and 8 weeks were needed for closure of fistula in 1 patient (2.9%) as shown in Fig. (2).

**Discussion**

Pharyngocutaneous fistula (PCF) development is a common complication of total laryngectomy resulting in increased length of hospital stay, delayed oral intake, delay of adjuvant therapy and often the need for complex wound care and additional procedures for fistula closure. Given the frequency of PCF and its significant morbidity, it is important to identify salient risk factors and potential measures for improving outcomes [3].

In the present study the fistulas were categorized as early (<30 days after surgery) and late (>30 days after surgery) fistulas. In most of the studies where PCF formation is investigated there appears to be no description of the late PCF. We had two late fistulas in our series. As reviewed by Genden et al., [4], postoperative fistulas have been reported to occur as late as 42 days after surgery.

It is generally agreed that most fistulas respond well to conservative treatment. Eighty-nine percent of fistulas healed with conservative management. A useful adjunct is to sterilize the fistula from
within by administering 10mL of 0.25% acetic acid by mouth. If the previously described measures are unsuccessful in sealing off the pharynx from the neck within three weeks, operative closure should be considered, although spontaneous closure may occur up to six weeks after onset [8].

In our study patients who developed PCF, pressure dressings were repeated twice a day, antibiotic therapy was administered according to culture and sensitivity test and improvement of all factors that promote healing by proper control of diabetes mellitus and improvement of hemoglobin and albumin level. Fistulas of 28 patients (82.4%) healed spontaneously and this is in agreement with Saki et al., [5] and Makitie et al., [6]. Only three patients in our study, the fistulas could not be closed after 8 weeks of conservative treatment, surgical repair was achieved using myocutaneous flaps prepared from pectoralis major muscle, one patient surgical repair for the fistula was done by deltopectoral flap and 2 patients had evidence of recurrence.

Conclusion:

In our study 34 patients had pharyngocutaneous fistula, in 28 patients (82.4%) the fistula was treated conservatively in the form of frequent dressings, antibiotic treatment according to culture and sensitivity, control of DM and improvement of hemoglobin and albumin level. 4 patients (11.7%) were treated by flaps (pectoralis major and deltopectoral). Conservative management for PCF should continue for 8 weeks and if fistula persists so it should be closed surgically.

We must exclude recurrence of the tumor in cases of late or persistent fistula.

References


