



Comparative study to evaluate middle turbinate axillary flap in primary endoscopic dacryocystorhinostomy

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Abstract

Background: Epiphora is an overflow of tears onto the face due to imperfect drainage of the tear conducting passages or excess lacrimal production.

Objectives: To evaluate mucosal flap that we make from the region of the axilla of the middle turbinate in the first steps of the surgery.

Patients and methods: Epiphora is a clinical sign or condition that constitutes insufficient tear film drainage from the eye that tears will drain down the face rather than through the nasolacrimal duct. DCR (Dacryocystorhinostomy) is indicated when the patient has acquired nasolacrimal duct obstruction, we do this either with or without silicon stent.

First step in the DCR (dacryocystorhinostomy) surgery is to create a flap from the region cover the upper attachment of the middle turbinate to the lateral nasal wall (many surgeons call it the axilla of middle turbinate hence we call the flap as axillary flap).

Classically we divide this flap to upper and lower halves, then resect the upper half to prevent adhesion. If we prove that resection of all the flap will not affect the re-epithelization this will decrease the intraoperative time of the surgery and will decrease the postoperative complication of adhesion.

Results: In our study age of patients was between 18 to 65 years old, 65% of them are females, no significant statistical difference between the two groups (group that resect the lower part of the flap and group that keep it) in regards to healing and re-epithelization.

Conclusion: We can conclude that resection of the lower part of axillary flap during DCR (dacryocystorhinostomy) will not affect results of surgery.

Keywords: dacryocystorhinostomy, epiphora, FESS surgery.

Introduction

Epiphora is an overflow of tears onto the face due to imperfect drainage of the tear conducting passages or excess lacrimal production. Probing of the canaliculi in experienced hands is an effective diagnostic tool (1). The correct diagnosis is the condition for the proper planning of therapy schedule (2). Probing as a first line therapy shows 82% successfulness in cases of nasolacrimal duct obstructions(3) Medical treatment with nasal steroid spray may be effective but the majority of obstructed cases will require surgical intervention in the form of Dacrocystorhinostomy (4). So DCR is the treatment of choice in resistant cases (5). It should be known that epiphora may generate and lead to serious problems (6).

Dacrocystorhinostomy (DCR) is a procedure performed for the treatment of epiphora due to blockage of the nasolacrimal duct (7). This is indicated when simple syringing and probing fail to relieve the condition (8). Although external DCR till now regard as the best, endoscopic DCR now regards as equally effective (9). This new technique of endonasal DCR involves creation of a large ostium and construction of nasal and lacrimal sac mucosal flaps (10). Complications from endonasal DCR are comparable to or less frequent than those of external DCR (11) Endoscopic DCR skip external scar and preserve lacrimal pump action (12). Functional epiphora after endoscopic DCR among patients with preoperative nasolacrimal duct obstruction appears to be uncommon (13). Silicon stenting has been used by many centers to prevent restenosis (14).

Aim of this study is to prove that resection of all middle turbinate axillary flap in DCR is of great

benefit over that method with preservation of the lower part of this flap

Materials and Methods

This study done to compare results of DCR in two groups, first we preserve the lower part of middle turbinate axillary flap and the second group we resect it (intraoperatively) applied on 60 patients done at Baqubah teaching hospital since 1st of April 2016 till ninth of April 2018.

Endoscopic DCR done for adult patient (above 18 years) complaining from excessive tearing due to acquired nasolacrimal duct obstruction. We exclude congenital cases, canalicular obstruction, revision surgery, traumatic obstruction and connective tissue disease.

There are two groups of patients:

Group I: (27 patients). Endoscopic DCR done with preservation of lower part of middle turbinate axillary flap.

Group II: 33 patients underwent endoscopic DCR with resection of this part of the flap. Follow up of patients for 7 months and the result was concluded depending on complete freedom from all symptoms clinically and if need endoscopically

Results

In this study patients were in age group from 18 to 65 years old, 40 were females and 20 were males, epiphora was presenting symptoms in all cases and swelling in lacrimal region was also presented in 11 cases.

Table (1): Distribution of patients according to gender.

Gender	No.	%
Male	20	33%
Female	40	67%

Concurrent septoplasty was done in 7 cases. 3 of group I and 4 of group II, 1 case of group I go to restenosis within 2 months. Also 1 patients of group II

complain restenosis due to adherence of septal mucosa of septoplasty and lateral nasal wall.

Table (2): show no. Of cases of DCR done with and without preservation of lower part of middle turbinate axillary flap during surgery with no. of complicated cases.

Group	No.	No. of complicated cases.	% of complicated cases.
Preserve lower part of flap(I)	27	1	4%
Resect all the flap (II)	33	1	3%

Discussion

Otolaryngologists move in the recent years to the field of DCR after the evolution of endoscopic instrumentations.

Failure in the endoscopic DCR may be due to inadequate removal of the medial wall of the sac, adhesions, granulation tissue and retained bony cover.

Middle turbinate axillary flap is created in first steps of endoscopic DCR and this flap is divided to upper and lower part, classically upper is resected and the lower is preserved, in our study we made 2 groups, first is with classical surgery and the second with resection of lower part of the flap (middle turbinate axillary flap), the rate of success in group I (preserve lower part flap) is 96% and in group II (resect lower part flap) is 97%.

This means that preservation of lower part flap is of no additional benefit in endoscopic DCR. and if we reach to the idea of resection of this part of flap, less intraoperative bleeding and more space for surgery will be gained and hence easier surgery will be obtained in less time

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