

Comparative study to evaluate silicone stent in endoscopic DCR

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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.

Objective: To evaluate silicon stent used in primary endoscopic dacryocystorhinostomy.

Patients and Methods: Thirty seven patients attended to Baqubah teaching hospital since 4th March 2013 till 9th March 2014. It 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. Dacryocystorhinostomy (DCR) is indicated when the patient has acquired nasolacrimal duct obstruction, we do this either with or without silicon stent. If in studies discover results of surgery is without stent is comparable with that with stent, we will reach to a point that leaving stent is better from point of view regarding its cost and complications.

Results: Age of patients in the present study was between 18 to 65 years old, 65% of them are females, no significant statistical difference between the two groups (group DCR with stent and group DCR without stent) in regards to complications.

Conclusion: We can conclude that silicone stent is not important in primary DCR.

Key words: Silicone stent, Dacryocystorhinostomy, Epiphora.

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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 Dacryocystorhinostomy (DCR) [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].

Dacryocystorhinostomy 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]. Early and controlled lining of the fistula with mucosal flap appears to prevent closure of the ostium with high success rate comparable with that of external DCR [12].

Endoscopic DCR skip external scar and preserve lacrimal pump action [13]. Functional epiphora after endoscopic DCR among patients with preoperative nasolacrimal duct obstruction appears to be uncommon [14]. Silicon stenting has been used by many centers to prevent restenosis [15].

Many studies showed that stenting has many complications that may exceed the benefit [16]. For example a study done by Chugh, show that surgical results of endonasal dacryocystorhinostomy with or without stent are almost equal and the use of stent is associated with patient discomfort, increased risk of complications and additional cost, so that he recommend that endoscopic dacryocystorhinostomy without silicon stent be the treatment of choice for patients complaining from chronic dacryocystitis [17].

This study aims to prove that dacryocystorhinostomy without stent is of great benefit over that with stent.

Patients and Methods

This study done to compare results of dacryocystorhinostomy with and without silicone stent applied on 37 patients done at Baqubah Teaching Hospital since 4th March 2013 till 9th March 2014.

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

There are two groups of patients: Group I: (17 patients). Endoscopic DCR done with silicone stent for 6 weeks. Group II: 20 patients underwent endoscopic DCR without stent. Follow up of patients for 7 months and the result was concluded depending on complete freedom from all symptoms clinically and if need endoscopically.

Statistical analysis

Chi-square test was used to describe different variables and parameters in this research.

Results

In this study patients were in age group from 18 to 65 years old, 24 were females and 13 were males, epiphora was presenting symptoms in all cases and swelling in lacrimal region was also presented in 13 cases.

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

Gender	No.	%	Chi ² -value
Male	13	35%	0.000
Female	24	65%	

Concurrent septoplasty was done in 4 cases. 2 of group I go to restenosis within 2 months after removal of the stent. 2 patients of group II complain restenosis due to

adherence of septal mucosa of septoplasty and lateral nasal wall and between stomal site and middle turbinate.

Table (2): Distribution of DCR with and without stent and its complications.

Group	No.	No.(%) of complicated cases.	Chi ² -value
With stent(I)	17	2(12%)	Non-significant
Without stent(II)	20	2(10%)	

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.

Stent used to prevent restnosis, in the present study the rate of success in group I (with stent) was 88.2% and in group II (without stent) was 90%. This means that stent is of no additional benefit in endoscopic DCR and if we reach to the idea of non- stent surgery, we will gain time, the coast will be less and the complications of stent will be discarded. Mohamad conclude in his study that endoscopic DCR without stent has higher success rate than that with stent [18].

The result of this study was comparable with many studies such as that published by Kakkar [19]. And with Basil [20]. Ambani in his research concludes that stent has several advantages over that without [21]. Shashidar in India had the same of our result [22].

Also our study was comparable with study done by Sachdeva who found that surgical results of endonasal dacryocystorhinostomy with or without stent are almost equal and the use of stent is associated with patient discomfort, increased risk of complications and additional coast , so that he recommend that endoscopic dacryocystorhinostomy without silicon stent be the treatment of choice for patients complaining from chronic dacrocystitis [23]. Pant in his study reached to similar results to our result , he published that

the role of using silicone stent in endoscopic dacrocystorhinostomy is not very promising because it's not improving the outcome of surgery rather it has been seen that more granulation formations in stent patients that may cause the failure in the later part of the life .silicone stent add the coast to the surgery and it causes irritation to the patients, sometime its removal is very painfull ,so endoscopic dacrocystorhinostomy without silicone stent is the treatment of choice in patiens of nasolacrimal duct obstruction and in cases of dacrocystitis [24]. Al-Qahtani in his study gave the same results, he said that there is no statistically significant advantage of using endoscopic dacrocystorhinostomy with stent over the endoscopic dacrocystorhinostomy without stent [25].

Really we found too many studies that prefer not to use silicone stent in primary dacrocystorhinostomy.

Conclusion: No important difference in success rates between endoscopic dacrocystorhinostomy with silicone stent and endoscopic dacrocystorhinostomy without silicone stent so as a final result no need for stent in endoscopic dacrocystorhinostomy.

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