

Outcome of External Dacryocystorhinostomy

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Abstract

Aim: To analyze the various factors affecting the outcome of external dacryocystorhinostomy (DCR). **Materials and methods:** Prospective study of forty five cases of chronic dacryocystitis, underwent planned external DCR without silicon tube intubation under local anesthesia (LA) by single surgeon. All the patient followed up post operatively for one and half years. During follow up periods patients were evaluated by syringing. **Results:** Syringing was freely patent in all the cases. Two patients developed post operative bleeding which was effectively controlled by fresh adrenaline soaked nasal pack. **Conclusion:** Proper pre operative evaluation and medications, investigations, ideal size bony ostium, adequate size flaps and suturing of both the flaps, surgeon skills and post operative medications are the main factors which influences the outcome of the external DCR.

Key Words: PREOP Evaluation, Ideal Ostium Opening & Flaps, Post OP Medications, Successful DCR.

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INTRODUCTION

One of the most common cause for epiphora is acquired nasolacrimal duct obstruction, which can occur for various reasons like trauma to nasolacrimal duct, inflammation⁸ or infections, chronic ocular medications, lacrimal sac stones, and rarely by tumors. External dacryocystorhinostomy (DCR) remains the “gold standard” for treating epiphora due to acquired nasolacrimal duct obstruction. Addeo Toti described the technique of external DCR in 1904, in which he suggested that having gained access to the sac via on external approach the part of it adjacent to the canaliculi be preserved and absorbed into the nasal cavity from which part of the nasal mucosa has been removed. A mucosal anastomosis with suturing of the mucosal flaps was later described by Dupuy-Dutemps and Bourget. This

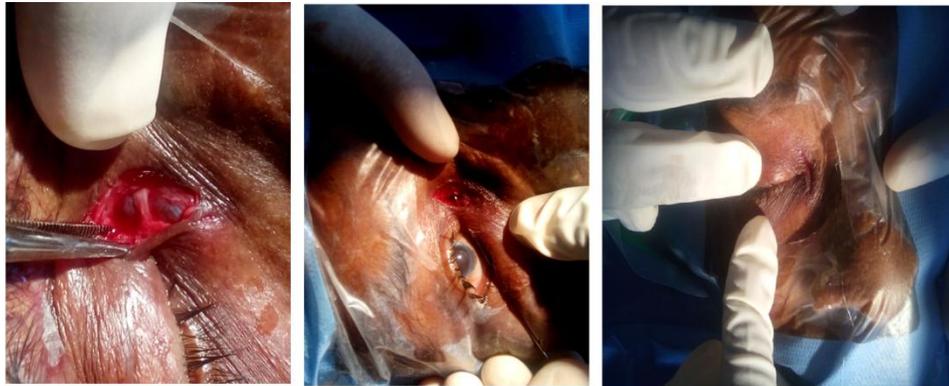
study was undertaken to analyze the various factors which can influences the outcome and complications of external DCR in adult patients with acquired chronic dacryocystitis.

MATERIALS AND METHODS

It is a prospective study of forty five cases of planned external DCR without silicone tube⁵ intubation under LA for acquired chronic dacryocystitis in adults. Patients in the age group of 20- 50 years of both the sexes with patent canaliculi, who were diagnosed to have chronic dacryocystitis included in this study. Patients who were less than 20 years and more than 55 years with canalicular obstruction, bleeding diathesis and failed DCR excluded from this study. All patients undergone through ocular examination in addition to this ENT surgeon opinion to rule out any nasal pathology. Investigations like haemoglobin, bleeding time, clotting time, blood sugar and X-ray PNS were done pre operatively. Nasal decongestant oxymetazoline nasal drops 2 drops twice daily three days before surgery was started in all cases. All cases were done under local anesthesia (mixture of 0.5% bupivacaine & 2% lignocaine with adrenaline)³. After cleaning and draping, skin incision made with No.15 blade, orbicularis muscle divided by using scissor. Periosteum incised and elevated from underlying bone. Lacrimal sac is separated by blunt dissection and bony opening (minimum of 1 cm) made in

the lacrimal bone, which was enlarged towards anteriorly. Anterior (larger) and posterior (smaller) flaps are made in the sac as well as in the nasal mucosa by 'H' shaped incision. Both the flaps¹ were closed by 6-0 vicryl suture. Intraoperatively 2 drops of antibiotic and steroid drops applied over the flaps to reduce the infection and fibrosis. After complete haemostasis wound closed in layers, skin sutured with 6-0 silk interrupted sutures. Post operatively nasalpack were removed after 12 hours. Systemic

antibiotics⁷, analgesics, serratiopeptidase given for one week and skin suture were removed on 7th or 8th post operative day. Topical antibiotic and nasal decongestant were continued for two weeks post operatively. Postoperatively follow up were done after 1 week, 1month, 3months, 6months, 1year and one and half years. Symptoms like watering and discharge were noted and syringing was done during the follow up visits.



RESULTS

All the cases syringing was freely patent and symptomatically also better during their follow up period. Two patient developed postoperatively bleeding which was controlled effectively by fresh adrenaline soaked nasal pack. Of the total forty five cases, twenty nine were females and sixteen were male patients. No post operative wound infections or other major complications. One patient did not came for the last follow up after one and half year. Though the number of cases is less (45 cases) in this study, the success rate is 100%²

DISCUSSION

Epiphora with or without mucopurulent or purulent discharge is one of the common symptoms for which patient consult the ophthalmologist or referred to the orbit and oculoplastic surgeon. Acquired nasolacrimal duct obstructions is one of the cause for the above symptoms. Which may occur due to trauma to nasolacrimal duct, inflammation or infections, chronic ocular medications, lacrimal sac stones, and rarely by tumors. As a general rule dacryocystectomy is performed only when there is lacrimal sac mass, dry eye, elderly or debilitated person with dacryocystitis. Even though various methods of dacryocystorhinostomy (like endonasal, laser assisted)⁴ available external DCR remains the "gold standard" for treating epiphora caused by nasolacrimal duct obstructions, because of its high success rate. With the modern days instruments, availability of absorbable fine sutures materials and meticulous surgery the visible scar in external DCR is

very less. The success rate⁹ or out come and complications of external DCR depends upon the case selection, proper preop evaluation and medications, relevant investigations, meticulous surgical skills including ideal (minimum 1 cm) bony opening, adequate size and properly sutured flaps (both anterior and posterior), finally post operative medications, instructions and follow up. The failure rate in external DCR may be due to inadequate small bony (ostium) opening, improper suturing of flaps, small atrophic sac, common canalicular obstruction, scarring within the anastomosis, persistent mucocele, sump syndrome, failed DCR and associated nasal pathology.

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