

USING CONJUNCTIVAL FLAP FOR THE REPLACEMENT OF JONE'S TUBE IN CONJUNCTIVODACRYOCYSTORHINOSTOMY (CDCR)

Rowena G. Hoesin

ABSTRACT

The objective of this study is to introduce the use of conjunctival flap for the replacement of Jones's tube in conjunctivodacryocystorhinostomy (CDCR) in Dr. Soetomo Hospital. A retrospective study was done from December 1999 until November 2002 towards patients with upper system obstruction of the excretory lacrimal apparatus, in Department of Ophthalmology Dr. Soetomo Hospital Surabaya. The technique was done using conjunctival flap as a tube instead of Jones's tube. The study was a descriptive analysis. The results of this study showed from 8 patients, the majority causes of upper system obstruction were injury in 5 patients (62.5%), infection in 2 patients (25%), tumor in 1 patient (12.5%). The success rate was 75% (6 patients), and 2 patients remained obstructed. Thus, on the basis of the results, it could be concluded that using conjunctival flap can be an alternative technique to replace Jones's tube in Conjunctivodacryocystorhinostomy surgery.

Keywords: *conjunctival flap, conjunctivodacryocystorhinostomy (CDCR), Jones's tube*

INTRODUCTION

Lacrimal apparatus functionally has two components consist of secretion and excretion system. Secretion system products tear film with three layers (fat, aqueous and mucin) caused by basal and reflex tear secretion. Meibomian gland (tarsal) products fat layer, Krause and wolfring glands product aqueous layer and mucin layer by Goblet cell. These four glands are basal tear secretion while reflex tear secretion is derived from lacrimal gland which caused by many stimulation.

Excretion system starts from lacrimal lake in the medial of the eye, goes through fossa nasalis which consist of common canaliculi, lacrimal sac and nasolacrimal duct and it ends in meatus nasi inferior.

Generally, lacrimal system is classified as horizontal segment which consist of punctum, canaliculi, and vertical segment consist of lacrimal sac and nasolacrimal duct. Lacrimal sac lies on the lacrimal fossa located on anteroinferior orbital medial wall and posterior from anterior lacrimal crest (important guidance for surgery).

Any horizontal and vertical segment disorders can disturb the tear flow. Trauma or tumor in the medial

area often destroy the excretory system and cause canaliculi and lacrimal sac. obstruction. If the canaliculi obstructed, by pass must be performed by doing direct connecting between lacrimal lake with lacrimal sac or nasal mucosa, which is known as conjunctivodacryocystorhinostomy (CDCR).

The operation of CDCR with retained tube, as introduced by Jones in 1961 followed by Talmant et al in 1979 has been done. In the Department of Ophthalmology Dr. Soetomo Hospital, patients with canaliculi obstruction had been done a technique with modification CDCR in which conjunctival flap as a tube was made instead of Jones's tube and connected with lacrimal sac or mucosa, during the period of December 1999 until November 2002.

MATERIAL AND METHODS

A retrospective descriptive study was done from December 1999 until November 2002. Preoperative examination included general eye examination, Annel test and sondage, Orbital photo, dacryocystography, consultation to ENT department to evaluate condition of the nose first.

*Department of Ophthalmology
Airlangga University School of Medicine
Dr Soetomo Teaching Hospital, Surabaya*

Methods

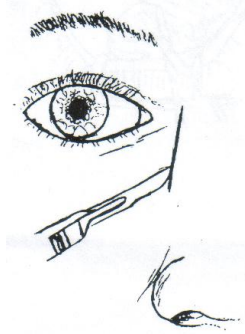


Figure 1. Incision was made at medial side with scalpel

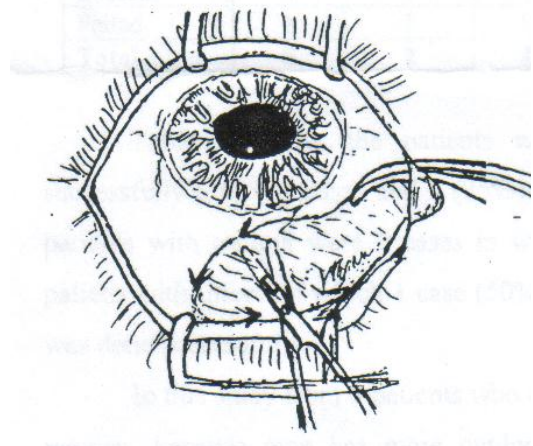


Figure 4. A conjunctival bulbi flap was made from medial canthus to the lateral side in the inferior fornix

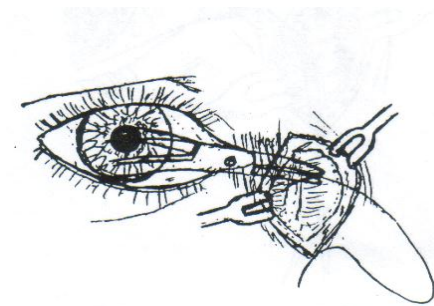


Figure 2. Open the lacrimal lake area and go through the lacrimal sac.

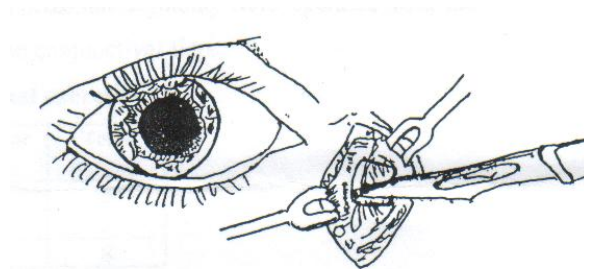


Figure 5. Open the periost to reach nasal mucosa and make a U incision in the nasal mucosa

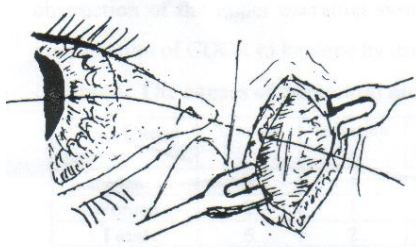


Figure 3. Supramide suture enter temporarily to these two areas

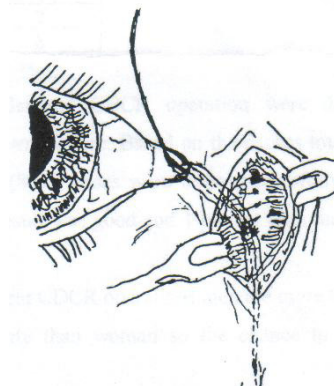


Figure 6. Supramide suture entered to the nose direction, and make connecting between conjunctival flap and nasal mucosa with interrupted suture and closed the wound layer by layer

RESULTS AND DISCUSSION

During the period of December 1999 to November 2002, 8 patients with obstruction of the upper excretion

system (horizontal segment) were operated with the modification of CDCR to be done by using the conjunctival flap.

Table 1. The causes of horizontal abnormal excretion

Cause Sex	Trauma	Infection	Tumor	Total
Man	3	1	1	5
Woman	2	1	0	3
Total	5	2	1	8

Table 1 shows that there were 5 (62,5%) men and 3(37,5%) women where the causes were 5 traumas, 2

infections and 1 tumor. In this study there were no congenital causes.

Table 2. The results of operation based on the causes

Cause Result	Trauma	Infection	Tumor	Total
Success	4	1	1	6
Failed	1	1	0	2
Total	5	2	1	8

Table 2 shows the patients who underwent CDCR operation were done successfully 6 (75%) cases and 2 (25%) cases were failure. Based on the causes totally patients with trauma were 5 cases in which 4 (80%) cases were done successfully, 2 patients with infection which 1 case (50%) the result was good and 1 patient with tumor was done successfully.

In this study from 8 patients who underwent CDCR operations men are more than women, because man has more outdoor activity than woman so the chance to get incidence is higher in man.

In 8 patients who underwent CDCR, 5 patients had directly done connection from conjunctival tube to mucosal nose. This condition caused by damaged lacrimal sac. In 2 patients, the CDCR operation were fail, due to detachment of the ethilon/supramide suture in the first week in one patient, and the other one is caused by granulation in medial canthus. There was 1 patient with meningocele who had been operated 4 years ago. This patient complained of tearing because there was destruction of superior and inferior canaliculi due to the meningocele and complication of the operation.

CONCLUSION

Using conjunctival flap as replacement of Jone's tube has benefit, because the cost is cheaper and the degree of successful is high.

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