



Original Article

Success of External Dacryocystorhinostomy in a Teaching Hospital

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Abstract

Epiphora caused by nasolacrimal duct (NDL) obstruction is managed by surgery of dacryocystorhinostomy (DCR) is well established. Now a day DCR can be done by two ways: external DCR and endonasal DCR. There are various success rates reported by various authors. It is seen that the current laser assisted DCR is still not able to attain success over the conventional external DCR. A newer modification of dacryocystorhinostomy operation where flap anastomosis with ceiling stitch with orbicularis and subcutaneous tissue has given high rate of success.

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Introduction

Epiphora caused by nasolacrimal duct (NDL) obstruction is managed by surgery of Dacryocystorhinostomy (DCR) is well established. Now a day DCR can be done by two ways-

External DCR and endonasal DCR

In External DCR it is approached externally by conventional approach where edge anastomosis of sac and nasal mucous over the bony margin of osteum described by Dumpy Dutemps and Baurguet in 1921 & in another approach without skin incision is translacrimal transnasal laser assisted DCR described by Pearlman SJ in 1997.^{1,2}

In endonasal DCR where bone is removed laser or drills guided by endonasal endosbycope.^{3,4}

There are various success rates reported by various authors. It is seen that the current laser assisted DCR is still not able to attain success over the conventional external DCR.^{5,6}

Due to failure of various percentage of external DCR, study is still continuing with various modifications. One such modification is anterior suspended flap by giving ceiling stitch in external DCR.

The aim of this study is to see the success of external DCR operation with modification of anterior suspended flap by giving anchoring stitch.

Material

Eighty eight cases of chronic dacryocystitis were studied in Ophthalmology Department of Rajshahi Medical College Hospital and private clinic from January, 98 to January 2001. All these cases had obstructive lesion of lacrimal drainage apparatus situated distal to the common canalicular opening.

Sac potency test, probing and Jones dye test were done in all cases.

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Methods

Pre-operative preparation: All selected patients were given to take nasal decongestant from 3 days before operation. Patient was also advised to give frequent pressure over sac before operation.

Anaesthesia

Nasal pack soaked with 1:100 adrenaline and 3 to 4cc 2% lignocaine mixed with chloramphenicol eye ointment was introduced in every case.

5 to 8 c.c. of local anaesthetic agent of 2% lignocaine mixed with bupivacaine 1% in the ratio of 3:2 was infiltrated locally along medial canthal region.

Surgical Procedure

Three-centimeter length skin incision was given 0.5cm medial to the medial canthus. Orbicularis oculi was split out. Angular jugular vein was identified and retracted either medially or laterally. Medial canthal ligament and periosteum were incised along the margin of insertion. Lacrimal sac was separated. Only anterior flap of lacrimal sac was formed by two horizontal and one vertical incision. Nasal and lacrimal bones were trephined. Osteum was enlarged to 15 × 15 mm.

The flap was stitched by 6/0 silk but flap was made ceiling with anchoring stitch by 6/0 chromic catgut with orbicularis muscle and subcutaneous tissue. Orbicularis muscle was stitched by 6/0 chromic catgut, skin was made apposed by mattress suture or continuous suture. Every patient was discharged on 2nd day. On 7th day, skin stitch was removed. Every patient was followed up on 15th day, one month and every 3 monthly interval.

Result

The age range of the patients were from 10 to 70 years and the average was 40 years. Table: I showed that distribution of chronic dacryocystitis in relation to age where were 40% cases were in

believe 41-50 year. Total cases of chronic dacryocystitis 88 of which 81 (92%) had undergone successful operation and shown in table II.

Table I: Distribution of cases in relation of age:

Total cases	10-30 years	31-40 years	41-50 years	51-60 years	61-70 years
88 (100%)	15 (17%)	27 (30%)	35 (40%)	5 (6%)	6 (7%)

Table-II: Result of Dacryocystorhinostomy

Total cases		Failure of DCR		Success of DCR	
No.	%	No.	%	No.	%
88	100	7	8	81	92

Discussion

Modification of anterior flap of sac nasal mucosa with ceiling stitch is described by Khan et al in 1996 and Baldeschi L et al in 1998, having success rate of 87.85% and 84.4% respectively.^{1,2}

But in this study, success is achieved in 92% cases which is more than any other study.^{2,3}

In this study, suture material is 6/0 silk gives less inflammatory reaction and apposition of flap is ensured by silk more than any other suture material especially commonly used catgut. This is the probable explanation of acquiring more success. Ceiling stitch helps not to retract and close the osteum and pseudosac formation but rather it hangs over the osteum. Passage is maintained and success rate is higher than any methods.

Conclusion

It is a newer modification of Dacryocystorhinostomy operation where flap anastomosis with ceiling stitch with orbicularis and subcutaneous tissue gives high rate of success.

So it is recommended to perform OCR with this method for epiphora due to nasolacrimal duct obstruction.

References

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