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ORIGINAL ARTICLE

EFFICACY OF CONSERVATIVE MANAGEMENT AND PROBING IN CONGENITAL NASO LACRIMAL DUCT OBSTRUCTION IN DIFFERENT AGE GROUP OF CHILDREN

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ABSTRACT: INTRODUCTION: Congenital naso lacrimal duct obstruction is one of the common congenital anomaly. This condition affects nearly 20% of all newborns. Most of the cases are self resolving but cases where it persists can be cured by probing. **AIMS:** The present study was conducted to find out the efficacy of conservative treatment and probing in different age group of children. **MATERIAL:** 48 children (24 children in Group A and 24 children in Group B) with unilateral involvement were included in study. Children were divided into 2 groups. In group A children up to age of 1 year were included, they were treated conservatively with massage and topical antibiotics. In group B children between ages 1 year – 2 years were included, they underwent probing. Success of Conservative management and Probing was the main outcome measure. Success was predefined as complete resolution of symptoms and signs; tearing, crusting, discharge, regurgitation on pressure over lacrimal sac area. **RESULT:** In group A, success rate was (91.67%), 22 out of 24 children were relieved of symptoms with conservative treatment of massage over nasolacrimal sac area and topical antibiotics. In group B, success rate was (83.33%), 17 out of 24 children were relieved of symptoms by 1st probing (70.83%); 3 out of 24 children were relieved of symptoms by 2nd probing (12.5%). **CONCLUSION:** In our study the success rate of Group A and Group B are almost similar. Hence we conclude that conservative management by massage can be done safely up to 1 year of age, the reason being most of the cases (91.67%) were resolved within the first year of life with it; never the less success of probing in second year of age too is highly successful and the success rate does not vary significantly (83.33%). Hence it is best to recommend probing in a child 1 year of age or more.
KEYWORDS: Naso lacrimal duct obstruction, Conservative management, probing.

INTRODUCTION: Congenital naso lacrimal duct obstruction is one of the common congenital anomaly. This condition affects nearly 20% of all newborns. Most of the cases are self resolving. Management consists of massage over naso lacrimal sac area, installation of antibiotic drops in cases where mucopurulent discharge is present and probing if the obstruction persists.

Considerable controversy exists about the timing of Probing and conservative management. This prompted us to compare the efficacy of, probing in a child if delayed beyond 1 year of age to Conservative management up to 1 year of age.

MATERIAL AND METHOD: 48 children (24 children in Group A and 24 children in Group B) with unilateral involvement were included in study. Children were divided into 2 groups.

In group A children up to age of 1 year were included, they were treated conservatively with massage and topical antibiotics.

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TECHNIQUE OF MASSAGE: After cutting the nails and washing the hands, the index finger is placed over the common canaliculus to block the reflux of secretions through the puncta into the conjunctival sac and the finger is stroked downward firmly, ten strokes four times a day, to increase hydrostatic pressure within the naso lacrimal duct; to rupture any membranous obstruction. Parents were asked to demonstrate their technique at each follow up visit fortnightly; to be sure they are doing as advised. Tobramycin eye drop were used 4 times a day. Massage was continued till the infant reaches 1 year of age.

In group B children between ages 1 – 2 years were included, they underwent probing.

TECHNIQUE OF PROBING: Probing was done under general anesthesia. The upper punctum is dilated using a punctum dilator. The lacrimal probe is introduced vertically and lid is pulled laterally. The probe is advanced horizontally till a hard stop is reached. The lacrimal probe is now turned 90 degree and directed toward the naso lacrimal duct downward, posteriorly and laterally. Post operatively tobramycin eye drop were used 4 times a day.

In those cases where the symptoms persisted, repeat Probing was performed after 6 weeks.

Success of Conservative management and Probing was the main outcome measure. Success was predefined as complete resolution of symptoms and signs; tearing, crusting, discharge, regurgitation on pressure over lacrimal sac area.

RESULTS: In group A, success rate was (91.67%), 22 out of 24 children were relieved of symptoms with conservative treatment of massage over naso lacrimal sac area and antibiotic drops.

In group B, success rate was (83.33%), 17 out of 24 children were relieved of symptoms by 1st probing (70.83%); 3 out of 24 children were relieved of symptoms by 2nd probing (12.5%).

Age	N.o.Patients	Percentage
Upto 1 year	24	50%
1 -2 years	24	50%

Table -1: Distribution of the patients according to their age

Symptoms free patients	No. of patients	Successful	Failed
Conservative management	24	22(91.67%)	2
Probing	24	20(83.33%)	4

Table -2: Distribution of the patients according to their recovery rate

DISCUSSION: Congenital obstruction of the distal end of the naso lacrimal duct is caused by thin persistent mucosal membrane (Hasner membrane).The initial therapy in these patients consist of conservative management of topical antibiotics coupled with massage with index finger over lacrimal sac area. In our study success rate with conservative management is 91.67% (22 of 24). It is quite high as compaired to study done by Petersen DB[1] in which success rate was 66% (77 of 117).

If congenital obstruction persists, lacrimal probing of the naso lacrimal duct is generally successful. In our study 17 out of 24 children were relieved of symptoms by first probing. The result

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were similiar to study done by Honavar[2] in which one attempt at probing resulted in resolution in 73.33% (44 of 60).

However if lacrimal probing is unsuccessful, it can be repeated for relieving the symptoms of congenital naso lacrimal duct obstruction. In our study overall success rate is 83.33% (20 of 24). The result were similiar to Honavar[2] in which overall success rate was 80% (44 of 60).

We recommend that parents should be properly guided about the correct technique of the massage. Though it is widely known that massage of the naso lacrimal system relieves most of the cases of congenital naso lacrimal duct obstruction but correct technique of massage is either not properly demonstrated by the busy ophthalmologist or not properly understood by the parent resulting in failure and need for probing.

The probing has been a time proven treatment of congenital naso lacrimal duct obstruction. But there is controversy regarding the timing of probing and its outcome in older children.

In our study the success rate with conservative management (91.67%) and probing (83.33%) are almost similar.

In children less than 12 months sac massage should be performed, unless there are strong reasons for early probing. In children of 1 year age or more probing is done. Repeat probing can be attempted in unresolved cases.[3]

REFERENCES:

1. Peterson DB Resolution of congenital nasolacrimal duct obstruction with non surgical management Arch Ophthalmol. 2012 Jun; 130(6) :730-4.
2. Honavar SG, Prakash VE, Rao GN. Outcome of probing for congenital nasolacrimal duct obstruction in older children. Am J Ophthalmol. 2000; 130(1) :42-8.
3. Congenital nasolacrimal duct obstruction: Presentation and management. Nazallah Khan. Pak J Ophthalmol 2006, vol. 22. No. 2

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