

# Success Rate of Probing In Cases of Congenital Nasolacrimal Duct Obstruction at Various Age Group – A Hospital Based Study.

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## Abstract

**Background:** Purpose: To determine success rate of probing for congenital Nasolacrimal duct obstruction at various age group. **Subjects and Methods:** The study was a prospective non comparative study done in the Dept. of Ophthalmology, PMCH, Patna from Jan 2017 to Jan 2019. 36 children (72 eyes) aged 5 months to 48 months diagnosed with congenital NLD obstruction were included in the study These were divided into Group 1 – below 6 months , Group 2 – 7 months to 12 months , Group3 - 13 months to 24 months , Group4 - 25 months to 48 months . Probing was done under GA in all subjects. All patients were followed at 1 week, 1 month, 3 months and 6 months respectfully. The probing was considered successful when complete remission of symptoms occurred after two weeks following the procedure. **Results:** The success rate of probing was 100% (18 eyes) in group 1, 91% (22 eyes) in group 2, 81 % (13 eyes) in group 3, and 35.7% in group 4. The overall success rate was 76.9%. **Conclusion:** The success rate of probing decreased with increasing age and age over 24 months predicts poor outcome. Hence, one should proceed with early probing than to wait for spontaneous resolution.

**Keywords:** Nasolacrimal Duct, Probing.

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## Introduction

Congenital nasolacrimal duct obstruction is the most common disorder leading to epiphora and occurs due to failure of canalization of the NLD at its distal end. The canalization of NLD usually occurs several weeks to months after birth. It is advisable to wait for spontaneous resolution. Criger described the technique of applying pressure over Nasolacrimal sac area along with topical antibiotics if infection is present. However, the standard surgical procedure in patients with NLD obstruction is probing of lacrimal system under general anaesthesia.

## Subjects and Methods

36 patients (72 eyes) with congenital NLD block in the age group 5months to 48 months were included in the study. The diagnosis was made on the basis of history of watering or discharge and confirmed by evidence of epiphora with and without mucopurulent discharge on ocular examination. Any treatment received earlier like NLD massage, antibiotics or previous probing were noted.

All patients underwent conservative medical therapy for 6 – 8 weeks and therapy was discontinued only when there was spontaneous resolution of epiphora or when patient was undergoing probing. Informed consent from the parents of the patients was

taken.

### Inclusion criteria:

- Children aged 5 months to 48 months
- Patients with congenital NLD block and failed conservative treatment
- Children of acute dacryocystitis
- Children with persistent discharge

### Exclusion criteria

- Any secondary cause like blepharitis, ectropion, punctal agenesis, congenital glaucoma, conjunctivitis were excluded
- Any nasal pathology
- Cases of canalicular obstructions

### Techniques of syringing and probing

The procedure was performed under GA. The upper and lower puncta were dilated with punctal dilator. Probing was done using a Bowmans probe size 000(0.7mm) to size 1(1.1mm). The probe was first directed vertically and then gently directed medially until a distinct bony feel was encountered. At this point, the probe was turned vertically and passed through NLD. Syringing was then done to check the patency of NLD which was said to be achieved if fluid passed freely without regeneration. Postoperatively topical antibiotics were prescribed for 2 weeks. Follow up was done at 1 week, 1 month, 3 months and 6 months after the procedure.

Success was defined as complete remission of watering and discharge with no reflux from pressure on lacrimal sac two weeks postoperatively.

Chi- square test was used for statistical analysis.

## Results

A total of 36 children (72 eyes) were studied. All patients in the study were with bilateral obstruction.

**Table 1: Age distribution.**

Age	Number
Under 6 months	9
1 month – 12 months	12
13 months – 24 months	8
25 months – 48 months	7

**Table 2: Signs.**

Signs	N ( eyes)	Percentage
Epiphora with discharge	46	62.3%
Epiphora on ocular exam.	24	33.3%
Mucocele	2	2.7%

**Table 3: Success rate of syringing and probing in 72 eyes in 36 patients.**

Age (months)	Successful		Unsuccessful	
	No. of eyes	Percentage	No. of eyes	Percentage
Under 6 months	18	100%	0	0
7months -12 months	22	91%	2	83%
13months - 24 months	13	81.2%	3	18.7%
25months - 48 months	5	35.7%	9	64.2%
Total	58	76.9%	14	43.05%

Most common sign was epiphora with discharge in 62.3% (46 eyes)

The over all success rate of probing was 76.9% in our study

which is comparable to other studies. Our study also showed decreasing trend of success rate with increasing age as 100%, 91%, 81.2% and 35.7% respectfully with 6 months, 12 months, 24 months and 48 months which is consistent with the other studies. Kashkouli et al concluded that elder children are more likely to have complicated non-membranous obstruction that might reduce cure rate.

It was also noted that the result of probing at 2 weeks was highly correlated with final result at 6 months. The cure rate was same at 3 months and 6 months follow ups.

All procedures was done under GA as there is lesser risk of trauma to delicate structure of the lacrimal drainage system. Hence, probing under GA is a safe option and primary surgical modality for treatment of congenital NLD block.

The success rate of probing decreased with increasing age and age over 24 months predicts poor outcome. Hence, one should proceed with early probing than to wait for spontaneous resolution.

## Conclusion

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