Original Article

Success Rate of Probing and Syringing at Different Age Groups at Nishtar Hospital Multan

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Objective: To determine the efficacy of Probing and Syringing in Congenital Nasolacrimal Duct Obstruction (CNLDO) patients of various age groups.

Methods: In this study, two hundred and forty six patients of either gender and ≥ one year of age with Congenital Nasolacrimal Duct Obstruction were included in this study. Demographic details from all the patients in terms of age and gender were recorded. The probing was done under general anesthesia, in stepwise manner using Bowman's probe size 00, followed by probes size 0, then 1, 2, 3.The patients were visited at 2 weeks, and 3 and 6 months postoperatively. Successful probing was documented as complete remission of watering and discharge together with no reflux from with lacrimal sac pressure two weeks after the procedure

Results: Age range in this study was ≥ one year with mean age of 6.804 ± 5.56 years. Majority of patients according to age groups were belongs to 1-5 years125(50.8%).Frequency and percentage of patients according to gender was 102(41.46%) males and 144(58.54%) females. The overall success rate of probing was seen in 173(70.3%) patients. Success rate was significantly better in 1-5 years age group which gradually decline as age increased (p=0.000),

Conclusions: Probing and Syringing has remained the best and time-tested procedure for the treatment of congenital NLD obstruction under General Anaesthesia. The best time is between 1 to5 year of age.

Keywords: congenital nasolacrimal duct obstruction, probing, age and efficacy.

Introduction

Congenital Nasolacrimal Duct Obstruction (CNLDO) is a common problem that ophthalmologists routinely face in their practice.[1] Most of the cases are self resolving. While up to 20 % of newborns have CNLDO, only 1-6% of infants have symptomatic obstruction.[2] The majority of cases (upto 96 %), usually resolve by the age of 1 year.[3] Most commonly, this is due to the presence of a membrane at the level of the valve of Hasner, which is present at the nasal opening of the nasolacrimal duct. Less frequent causes include congenital atresia of the NLD, congenital lacrimal sac mucocele, congenital absence of valves, absence or atresia of canaliculi and puncta, and facial cleft anomalies.In cases of congenital lacrimal system obstruction, the diagnosis is usually clear cut on history and examination as child present with watering, discharge, matting of eyelashes and inferior palpebral congestion. In doubtful cases, the dye disappearance test can be conducted.

Crigler was the first to describe lacrimal sac massage.[4]This is the first line of management before probing. Conservative management by massage can be done safely upto 1 year of age; the reason being most of the cases (96 %) will resolve within the first year of life.[5]

Probing of the nasolacrimal duct system is a standard procedure in the management of congenital nasolacrimal duct obstruction.[6] However, the timing for initial probing has been a matter of controversy.[7] Any decision to probe before one year should take this high rate of spontaneous resolution into account. However, recurrent infection and discharge and the attendant lid irritation may occasionally prompt the decision to probe early, as the need for anesthesia at an early date for some other procedure.

The success of probing falls after 1 year of age. Hence in a child 1 year of age or more, it is best to recommend probing to the parents. Success ranges between 92 % 97 % if done before 1 year of age but beyond 1 year the success falls to 55 %-80 %.[8,9] Controversy exists regarding the natural course and management of CNLDO. The standard surgical procedure for children with persistent obstruction is probing of the lacrimal system under general anesthesia (GA). However, timing of probing has long been a controversial topic. The purpose of our study was to determine the efficacy of Probing and Syringing in CNLDO patients of various age groups.

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Methods

This descriptive case series was conducted in indoor

Success rate was significant better in 1-5 years age group which gradually decline as age increased (p=0.000) as shown in **Table-III.** There was no significant difference of success rate in male and female groups as shown in **Table-IV.**

Discussion

The lacrimal drainage system is formed as a depression termed lacrimal groove at approximately 6 weeks of gestational age. A solid cord of ectoderm is buried and canalization of the cord begins at approximately 3.5 months and is usually complete at birth. Failure of the canalization of the nasolacrimal duct may occur leading to epiphora. Probing and syringing is the main form of treatment. Spontaneous resolution occurs in majority of infants. Advocates of early probing suggest that early correction avoids complications such as acute dacryocystitis, recurrent dacryocystitis or canaliculitis[8] and prevents months of morbidity due toEpiphora and chronic dacryocystitis. In our study, the overall success rate was around 70.3% which is comparable to previous studies.[10-14] Our study showed a significant trend of decreasing success rates with increasing age: 92%, 75%, 40%, 9.5% and 20% at 1-5, 6-10,11-15,16-20 and >20years of age, respectively which is consistent with other studies.[14,15]A success rate of 94% was reported by Havins and Wilkins[16] for probing done in children less than 8 months compared to 56% in children age 18 months and older. Sturrock[17] and associates reported 86% success when probed under one year compared to 72% between 1 and 2 years of age and 42% for more than 2 years of age. Katowitz and Welsh[8] had a success rate of 76.4% between 13-18 months, but the curerate declined to 33.3% in children older than 24 months. Mannor[18] and colleagues found a negative correlation between the age and the success rate of probing. In contrast to these studies, El-Mansoury[19], Robb[20], and Zwaan[21] and colleagues found more than 90% success rate in late and very late probing. Robb[20] found no difference in cure rate with increasing age and noted an overall success rate of 92% varying from 88.9-96.8% at different age intervals up to and beyond 3 years of age. Honavar[22] et al. reported a success rate of 75.0% upto 4 years of age, after which it was 42.9% in children older than 4 years. Casady[23] et al. reported a success rate of 85% for probing in children, more than 18 months age.

Conclusion

Probing and Syringing has remained the best and time-tested procedure for the treatment of congenital NLD obstruction under General Anaesthesia. The best time is between 1 to5 year of age.

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