

Original Article

Hydrostatic Message is an Effective Measure in Canalization of Congenital Naso-Lacrimal Duct Obstruction

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Abstract:

Congenital nasolacrimal duct obstruction presented as watering from eye is often seen in ophthalmic practice. It is estimated that about 20% of newborn suffer from such condition. Out of this, 2-3% suffers from only watering but most of them suffer from both watering & discharge. Most cases of watering in the newborn are due to incomplete canalization of nasolacrimal duct, which is delayed due to unfavourable environment in the vicinity. It needs effective medical treatment to keep healthy environment to exacerbate the process of canalization. Treatment of nasolacrimal duct obstruction varies among physicians, as to timing & forms but highly successful in most cases but early treatment is important. About 95% cases can be cured by hydrostatic message and only 5% needs probing operation under general anesthesia. The aim of our study is to establish that hydrostatic message is an important treatment option for congenital nasolacrimal duct obstruction. This study was conducted in the department of Ophthalmology at Diabetic Association Medical College & Hospital, Faridpur, from January 2012 to December 2014. A total 100 cases of newborn baby of watering with or without discharges were selected by random sampling. Age group ranges between 07 days to two years. Hydrostatic message was given to all of them after adequate training of hydrostatic message & its importance for the effective treatment to parents or the attendant. In addition, broad spectrum topical antibiotic drops and supportive medication was given. Patients were followed up 3 monthly for 2 years. In this study, 95 patients (95%) were cured. So, hydrostatic message is effective in canalization of congenital nasolacrimal duct obstruction.

Key words: Nasolacrimal duct obstruction, hydrostatic message, probing.

Introduction:

Congenital nasolacrimal duct obstruction occurs in infants because of failure of nasolacrimal duct to open into the inferior meatus of the nose. However, watering does not occur immediately as lacrimation does not begin until 6 weeks after birth¹. Nasolacrimal duct arises from a cord of ectodermal tissue during the 3rd month of gestation. Canalization of this cord takes place by degeneration of the central cells. The development process is completed soon after birth². But in about 20% cases there is membranous obstruction at the level of valve of Hasner² & show the evidence of nasolacrimal duct obstruction. Treatment of nasolacrimal duct obstruction varies among physicians as to timing & form but is highly successful in most

cases. Many nasolacrimal duct obstruction clear spontaneously by about one year of age. Broad spectrum topical antibiotic drops, supportive medication and hydrostatic massage provide 95% cases cure².

Hydrostatic message is applied by - Index finger is placed over the common canaliculus to block reflex through the puncta & then messaged firmly downwards². Fifteen such strokes should be applied three times a day. It increases the hydrostatic pressure inside the lacrimal sac & causes rupture of the membranous obstruction². The purpose of our study is to establish that hydrostatic message is an important treatment option of congenital nasolacrimal duct obstruction.

Materials and Methods:

This study was conducted in the department of Ophthalmology at Diabetic Association Medical College & Hospital, Faridpur, from January 2012 to December 2014. A total 100 cases of newborn baby aged between 07 days to two years suffering from watering with or without discharges were selected by random sampling. All patients were treated as

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outpatient. Hydrostatic massage was given to all of them after adequate training of hydrostatic massage & its importance for the effective treatment to parents or the attendant. Massage was done in two way movement over the side of the nasal bridge but actually one has to give assistance to the lacrimal pump system mechanically by pressing the lacrimal sac downward from above follow the corner of the medial canthus tracking medial palpebral ligament, so external pressure along with gravity will help to canalize the lower part of the nasolacrimal duct. Besides massage, antihistamine, topical antibiotic drop and nasal decongestant drop was given as needed to keep the environment around the nasolacrimal duct suitable for canalization. All patients were followed up 3 monthly for 2 years to see treatment outcome.

Results:

Among 100 patients with nasolacrimal duct obstruction, majorities were suffering from unilateral watering and they start to improve from the end of the first week of treatment. Few cases showed delayed improvement because of poor understanding about nature of massage but subsequently responded after re-administration of procedure. Finally, 95 patients (95%) were cured and 5 (5%) patient needed long term follow up with intermittent improvement & needs surgical treatment by probing under general anesthesia.

Discussion:

Watering in newborn baby mostly due to nasolacrimal system defects i.e, incomplete canalization. Watering may be from some other reason like congenital punctal stenosis, absent of nasolacrimal duct, ending in the maxilla, foreign body in the conjunctival sac and congenital glaucoma. In our study 95% cases improves with hydrostatic massage. In a previous study by Islam SF et al³ showed 98% cure rate which are compatible with our study.

Conclusion:

Efficient medication & effective hydrostatic massage cures about 95% case of congenital nasolacrimal duct obstruction. So it should be understood & honoured by the concerning physician & the attendant of the baby.

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