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Clinical spectrum in congenital nasal duct obstruction

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Abstract

The present study is a retrospective comparative case series. The inclusion criteria were either sex, nosystemic disorder, and available followup of at least 3 months. Any patient who did not confirm to above was excluded from the study. In 30 children with 35 eyes with congenital naso-lacrimal duct obstruction were subjected to this study and with parameters like age at presentation, age at onset of symptoms, sex, eye involved and birth history of the child with special reference to birth trauma. Many factors must enter the decision of when and how to treat congenital naso-lacrimal duct obstruction. The age at which the child presents to the hospital is an important consideration. These are different clinical spectrum of congenital nasal duct obstruction. Earlier diagnosis helps in management.

Keywords: Clinical spectrum, congenital nasal duct and obstruction

Introduction

In 1912, Schaeffer^[1] emphasized that irregularities in the naso-lacrimal duct and diverticula are common congenital aberrations.

Busse and colleagues (1980)^[2] provided photographic documentation of these particular anatomic variations at the nasal end of the naso-lacrimal duct.

The incidence of congenital naso-lacrimal duct obstruction ranges from 1.75% to 5% (Cassady, 1948)^[3].

Some ophthalmologists advise a conservative approach (topical antibiotics and sac massage with various techniques) till 12-13 months of age.

Materials and methods

The present study is a retrospective comparative case series. The inclusion criteria were either sex, nosystemic disorder, and available follow-up of at least 3 months. Any patient who did not confirm to above was excluded from the study.

Results

In 30 children with 35 eyes with congenital naso-lacrimal duct obstruction were subjected to this study and with parameters like age at presentation, age at onset of symptoms, sex, eye involved and birth history of the child with special reference to birth trauma.

Table 1: Age AT First Presentation

Age at first presentation	No. of patients	Percentage
0 – 1 year	17	56.67
0 – 3 months	4	
3 – 6 months	5	
6 – 12 months	8	
1 – 2 years	9	30.00
2 – 3 years	3	10
3 – 4 years	1	3.33

56.67% of patients presented to the hospital during the 1st year of life. 30% of cases were in the age group 1-2 years. 10% of patients were in the age group of 2-3 years and 1% patients were in the age group of 3-4 years.

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Table 2: Sex Distribution

Sex	No. of patients	Percentage
Male	17	56.67
Female	13	43.33

Out of 30 patients of naso-lacrimal duct obstruction under study, 17 were males and 13 were females.

Table 3: Incidence of Side Affected

Laterality	No. of patients	No. of cases	%
Right eye only	11	11	31.42
Left eye only	14	14	40.00
Both eyes	5	10	28.58

The above table showed that 71.42% of patients had unilateral congenital naso-lacrimal duct obstruction.

Table 4: Number of Cases in Each Age Group

Age group (years)	No. of cases			%
	Unilateral	Bilateral	Total	
0 – 1	17	3	20	57.14
1 – 2	9	2	11	31.42
2 – 3	3	-	3	8.57
3 – 4	1	-	1	2.87

Each naso-lacrimal duct obstruction was considered as one case.

Family History: None of the cases under study had positive family history of similar complaints in the blood relations of the child.

Table 5: Obstetrical History

Mode of delivery	No. of patients	Percentage
Normal delivery	25	83.33
Forceps delivery	1	3.33
Caesarean section	4	13.33

The mode of delivery of the child was normal in 83.33% of patients. Forceps delivery occurred in 3.33% patients and 13.33% of patients had a caesarean mode of delivery.

Table 6: Age At Onset Of Clinical Symptoms

Age at onset	No. of cases	Percentage
0 – 1 month	29	82.86
0 – 7 days	14	
7 – 14 days	13	
14 – 30 days	2	
1 – 2 months	3	8.57
2 – 4 months	2	5.71
4 – 6 months	1	2.86

The above table showed that 82.86% of cases had onset of clinical symptoms by the end of first month of age.

Table 7: Clinical Manifestations

Clinical manifestation	No. of cases	Percentage
Epiphora only	12	34.29
Epiphora with discharge		
Muco-purulent	15	42.86
Purulent	7	20.00
Narrow interpallebral fissure	1	2.85
Mucocele	-	-
Lacrimal abscess	-	-
Lacrimal fistula	-	-

34.29% of cases had epiphora alone 42.86% of the cases had muco-purulent discharge, 20% of cases had purulent discharge.

Table 8: Result of Regurgitation Test

Regurgitation test	No. of cases	Percentage
Positive	31	88.57
Negative	4	11.43

Regurgitation test was positive in 88.57% of cases and negative in 11.43% of cases.

Table 9: Characteristic of Regurgitation Fluid

Nature of Regurgitate	No. of cases	Percentage
Serous	9	25.71
Muco-purulent	17	48.58
Purulent	9	25.71

The nature of regurgitate was serous in 25.71% of cases. It was muco-purulent in 48.58% of cases and purulent in 25.71% of cases.

Discussion

Many factors must enter the decision of when and how to treat congenital naso-lacrimal duct obstruction. The age at which the child presents to the hospital is an important consideration.

Conclusions

These are different clinical spectrum of congenital nasal duct obstruction. Earlier diagnosis helps in management.

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