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Congenital Nasolacrimal Duct Obstruction: The Proper Technique of Massage

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Congenital obstruction of the nasolacrimal duct (NLD) is a condition frequently encountered by pediatricians. Estimates of the incidence of the condition in newborns range between 1% and 6%(1,2). Management consists of massage of the nasolacrimal system, instillation of antibiotic drops in cases where a mucopurulent discharge is present, and probing if the obstruction persists beyond 6 months(3,4).

We observed that the technique of massage generally advised to parents did

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Received for publication: November 21, 1991;

Accepted: July 26, 1993

not result in opening up of the duct, with persistent epiphora and a high rate of probing subsequently. When asked to demonstrate the technique of massage being practiced, most parents were found to massage either at the wrong place (over the nasal bone), or too gently, or in the wrong direction (up and down). This prompted us to compare the results of different techniques of massage of the NLD.

Methods

Between January 1989 and December 1990, infants below the age of 5 months presenting with congenital NDL obstruction were prospectively randomized into 2 groups. Parents of infants in Group A were instructed to place the index finger over the inner canthus of the affected eye and exert gentle pressure inwards over the lacrimal sac in order to express secretions into the conjunctival sac. Parents in Group B were instructed to place the tip of the index finger over the nodule (medial palpebral ligament) at the inner canthus of the affected eye in such a way that the nail touched the eyeball through the upper lid (*Fig. 7*). They were asked to press the nodule, which lies over the common canaliculus, to block the reflux of secretions through the puncta into the conjunctival sac (*Fig. 2*). They were then



Fig. 1. Correct position of index finger

asked to press downwards firmly, five strokes twice a day, to increase hydrostatic pressure within the NLD.

Parents in both groups were asked to demonstrate their respective techniques at the time of entry into the study and subsequently at each follow-up visit fortnightly, to be sure they were doing it as advised. Chloramphenicol eye drops were used 4 times a day if there was mucopurulent discharge in each group. Massage was continued till the signs and symptoms of NDL obstruction resolved or the infant

reached 6 months of age, at which time the NDL was probed.

Results

There were 33 infants in each group. In Group A, 15 were male, 18 female; in Group B, 17 were male, 16 female. The mean age at presentation in Group A was 2 months and 7 days, while in Group B it was 2 months and 21 days. In Group A the epiphora disappeared in 7 infants over a mean time of 3 months and 10 days while in Group B the epiphora disappeared in 30 infants over

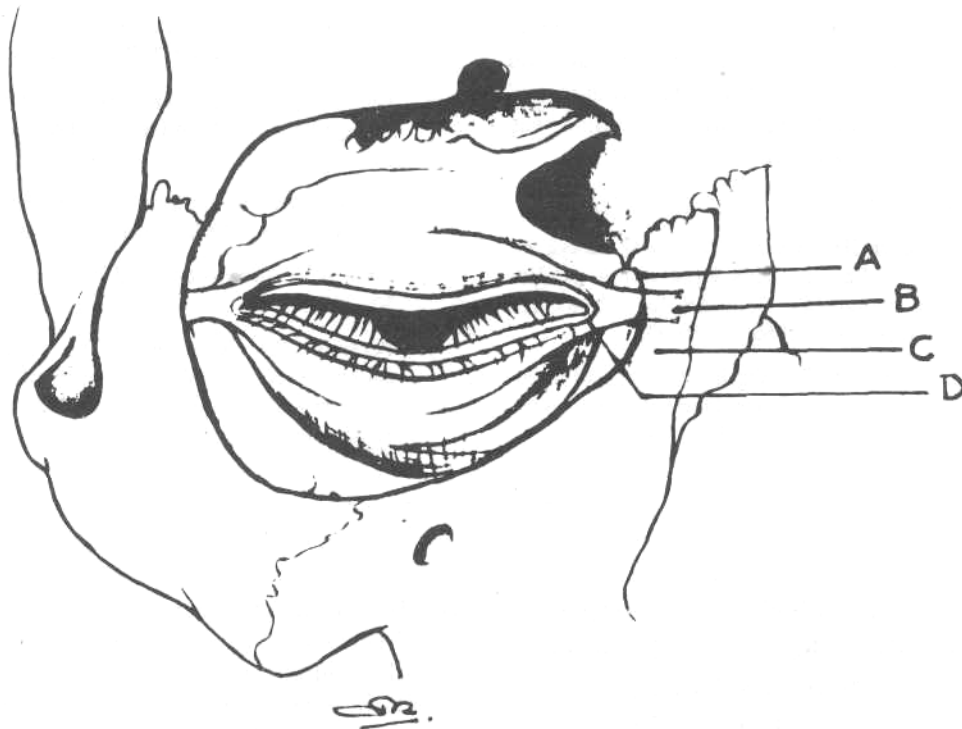


Fig. 2. Anatomy of the orbit. A. Lacrimal sac; B. Medial palpebral ligament; C. Frontal process of maxilla; D. Medial canthus.

a mean time of 1 month and 17 days. The overall success rate was 21% in Group A and 91% Group B. The difference between the two techniques was highly significant ($p < 0.001$).

Discussion

Though it is widely known that massage of the nasolacrimal system relieves many congenital NLD obstructions during early infancy, the correct technique of massage is either not properly demonstrated by the busy clinician or not properly understood by the parent resulting in a high failure rate and need for probing.

In 1923, Crigler(5) stressed that proper massage of the NLD resulted in a 100% cure rate over an observation period of 7

years. However, he did not mention the number of infants in his study. Using the same technique Price(6) in 1947 reported a cure rate of 94.6% in 203 infants with NLD obstruction by the age of one year. Peterson and Robb(7) in 1978 studied the natural course of congenital NLD obstruction in 50 infants and found that 44 had spontaneous resolution with medical management. Kushner(4) in 1982 demonstrated clearance of obstruction in 31 % of 59 eyes with proper massage as compared to 9% of 58 eyes with simple massage. In our series of 66 infants below the age of 5 months, the relief of obstruction was obtained in 91% with proper massage as compared to 21% with improper massage.

It is recommended that pediatricians

must take time to demonstrate the correct technique of massage of the nasolacrimal system to parents of affected infants and make sure they are doing it the right way during follow-up visits.

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Maternal Beliefs and Practices Regarding the Diet and Use of Herbal Medicines During Measles and Diarrhea in Rural Areas

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Restriction of diets during illness is one of the multiple factors resulting in malnutrition besides poverty and lack of education in the society(1). Some mothers feed while others avoid feeding during illnesses due to cultural beliefs. Deep seated wrong

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*Received for publication: March 19, 1993;
Accepted: September 4, 1993*

beliefs and the ignorance about the nutritional needs of children regarding feeding of sick children are important causes of malnutrition among children(2-4). In rural areas the use of herbal medicines during common childhood diseases is also practised. Some studies have been conducted on these aspects in different parts of the country. However, Rajasthan, in general, and semiarid areas in particular (Jaipur) are devoid of such investigations. Moreover, the use of herbal medicines by rural mothers in this region is totally an unexplored field. Keeping in view the above facts, the present investigations were conducted to determine the dietary practices regarding preferences and restrictions of food and herbal medicines used by rural mothers during two common childhood illnesses (measles and diarrhea), so that the information thus collected can be utilized in formulating nutrition education programmes.

Material and Methods

The present study was conducted in 21 villages of Jaipur District (Rajasthan). The