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Ophthalmic problems among children with orofacial clefts

Arina Tupīte¹ and Artjoms Tupits²

¹Latvian University, Latvia

²Rīga Stradins University, Latvia

Statement of the Problem: Cleft lip and/or palate are the most common form of craniofacial defects and may occur isolated or in association with many other structural abnormalities of the adjacent vital structures of the face like the ears, eyes, nose, teeth and brain. Eyes originate as an extension of the forebrain, malformations involving ocular structures invariably accompany those of the face and brain and vice versa. It is estimated that these defects affect approximately 1 in every 600 newborn babies worldwide. Each year in Latvia, about 30-40 babies are born with an orofacial clefts (OFCs).

Aim: The aim of this study was to identify and analyze the prevalence of ophthalmologic problems faced by parents of children with OFCs.

Materials & Methods: Total of 153 parents were surveyed in Riga Cleft Lip and Palate Centre during November 2015 to December 2016. The questionnaire consisted of 10 questions asking parents about child's concomitant and ophthalmologic diseases. Data was statistically analysed with Microsoft Excel, IBM SPSS 22.0.

Findings: In total, 153 questionnaires were included in this study. Of the 153 patients with cleft lip and palate screened, 13 (8.5%) had ocular abnormalities. Eye pathologies were most commonly encountered among patients with isolated cleft palate (18%) less common (14%) among patient with cleft lip and palate and infrequently (6%) affected patient with cleft lip. Eyelid abnormalities were the commonest accounting for 63 % of the total defects. Second commonest abnormality was squint (27%), abnormalities of the nasolacrimal apparatus (8%) and refractive errors (2%).

Conclusion: Our survey revealed that eyelid abnormalities, nasolacrimal duct dysfunction and refractive errors are the commonest ophthalmic pathologies. Children with OFCs are at high risk of developing ophthalmic pathologies should be assessed as soon as possible after birth by a multidisciplinary team involving the Ophthalmologist as well.

Recent Publications

1. Edward D P, Kaufman L M (2003) Anatomy, development, and physiology of the visual system. *Pediatr. Clin. North. Am.* 50(1):1-23.
2. Guercio J R, Martin L J (2007) Congenital malformations of the eye and orbit. *Otolaryngol. Clin. North. Am.* 40(1):113-140.
3. McNab A A, Potts M J, Welhan R A (1989) The EEC syndrome and its ocular manifestations. *Br. J. Ophthalmol.* 73(4):261-264.
4. Nema H V, Singh V P, Nema N (2002) Congenital anomalies of eye and adnexa. In: Agarwal S, Agarwal A, editors. *Text book of Ophthalmology; Retina and Vitreous in Systemic Diseases*. pp. 2939-2964
5. Sonal Anthelia, Krishna Shama Rao, Krishnamurthy Bonanthaya, B Anupama and I Vittal Nayak (2011) Ophthalmic considerations in cleft lip and palate patients. *J. Maxillofac. Oral Surg.* 10(1):14-19.

Biography

The 6th year student of Latvian university faculty of Medicine. The author and co- author of many scientific publications in ophthalmology : publication in the Latvian medical journal "Limbal stem cell deficiency. Surgical treatment options" (2016), participation and oral poster presentation in the Latvian University International scientific conference "The surgical treatment options of pterygium" (2017) oral presentation in Latvian University International scientific conference 2018 with thesis "The most frequent visual apparatus diseases among patients with cleft palate" . Awards: Second place winner in Riga Stradins University International student conference 2017 (thesis: Feeding disorders among the children with orofacial cleft) Arina Tupite is a student University of Latvia, Faculty of Medicine. Her sphere of interests is to study congenital ophthalmic pathologies in children with orofacial clefts. After graduating from the faculty, she wishes to continue studies in the Department of Ophthalmology.

arina.tupite@gmail.com