

OROGASTRIC TUBE PROLONGED USE AND PALATAL ANATOMY IN NONKETOTIC/HYPERGLYCEMIA INFANT

SILVIA JOSÉ CHEDID*, VINICIUS PETRILLO, MARCELO BONECKER

1-Pediatric Dentist. School of Dentistry (University of São Paulo –Brazil)

OBJECTIVE: To propose a treatment for recovery changes in the anatomy of the palate due to prolonged use of an orogastric tube through oral exercises and digital compression in an infant patient with non-ketotic hyperglycemia.

CASE REPORT DESCRIPTION: Nonketotic hyperglycinemia is an inborn error of metabolism of autosomal recessive genetic origin. This condition causes early neurological manifestations and damages the central nervous system. The most common features are hypotonia, lethargy, inability to suck and difficulty feeding. Due to severe hypotonia, difficulty in sucking and prolonged use of oro/nasogastric tubes, these patients present changes in the anatomy of the arches and severe maxillary atresia. The patient was diagnosed at birth with nonketotic hyperglycemia and at the age of one year started treatment with severe maxillary atresia. Picture 1.

DIGITAL COMPRESSION DESCRIPTION: The proposed treatment consisted of digital compression with the index fingers positioned bilaterally at the level of the trans-palatine cleft with light transverse pressure (until small local ischemia) sliding back and forth. Maxillary expansion therapy was performed for 6 months twice a day until occlusion and harmony between the arches were established. The patient is currently undergoing motor and sensitization work and has been progressing to oral meals for approximately 1 year, with chewing guidance for liquid or pasty textures, with progression of dysphagia, oral mobility, and the entire oropharyngeal complex. Picture 2-3

CONCLUSIONS: Digital compression therapy provided symmetrical and satisfactory maxillary expansion to establish satisfactory occlusion for the deciduous dentition as shown in the clinical pictures before and after treatment. Pictures 4-9.



Picture 1



Picture 2



Picture 3



Pictures 4-9



1. Holmqvist P, Polberger S. Neonatal nonketotic hyperglycinemia. Diagnoses and management in two cases. *Neuropediatrics*. 1985;16(4):191-3.
2. Sehgal V, Ramji S. Nonketotic hyperglycinemia in a neonate. *Indian Pediatr*. 1998;35(3):278-81.
3. Behrman RE, Jenson HB, Klugman RM. Tratado de pediatria. 16ª ed. Rio de Janeiro: Guanabara Koogan; 2002.
4. OLIVEIRA SANTOS, J.; DE SOUZA MATOZO, A. M.; ANIELLY ROCHA DE OLIVEIRA, J.; ONOZATO CASTRO FERNANDES, R.; REGIORE MACIEL, M.; DE FREITAS SILVEIRA ALVES, M. Hipergliccinemia não cetótica – relato de caso. *Perspectivas Experimentais e Clínicas, Inovações Biomédicas e Educação em Saúde (PECIBES)* ISSN - 2594-9888, v. 5, n. 2, p. 11, 27 maio 2020.
5. Alves PV, Luiz RR. The influence of orotracheal intubation on the oral tissue development in preterm infants. *Oral Health Prev Dent*. 2012;10(2):141-7.
6. Pausson L, Bondemark L, Söderfeldt B. A systematic review of the consequences of premature birth on palatal morphology, dental occlusion, tooth-crowndimensions, and tooth maturity and eruption. *Angle Orthod* 2004; 74(2):269-79