International Science Group

ISG-KONF.COM

XIII
INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE "MULTIDISCIPLINARY ACADEMIC RESEARCH, INNOVATION AND RESULTS"

Prague, Czech Republic
April 05 - 08, 2022

ISBN 979-8-88526-749-6

DOI 10.46299/ISG.2022.1.13

MULTIDISCIPLINARY ACADEMIC RESEARCH, INNOVATION AND RESULTS

Proceedings of the XIII International Scientific and Practical Conference

Prague, Czech Republic
April 05 – 08, 2022

Library of Congress Cataloging-in-Publication Data

UDC 01.1
The XIII International Scientific and Practical Conference «Multidisciplinary academic research, innovation and results», April 05 – 08, 2022, Prague, Czech Republic. 831 p.

ISBN - 979-8-88526-749-6
DOI - 10.46299/ISG.2022.1.13

EDITORIAL BOARD

74.	Kulynych M., Mochalov I. THE SPECIAL ASPECTS OF THE ALVEOLAR PROCESS DEFECTS RECONSTRUCTION FOR CHILDREN WITH CONGENITAL DEFECTS OF THE MIDDLE FACE	345
75.	Liabakh A., Turchyn O. INFLUENCE OF THE POSITION OF HINDFOOT ON THE GROUND REACTION FORCES	348
76.	Primova G., Gaybullayeva D., Yusupova G. ANATOMICAL AND PHYSIOLOGICAL FEATURES OF THE DEVELOPMENT OF THE NOSE BARRIER	351
77.	Proshchenko O. GENITOURINARY SYNDROME AFTER VAGINAL HYSTERECTOMY	353
78.	Shevchenko A., Syusyuka V., Kyryliuk A., Deynichenko O., Onopchenko S. MODERN ASPECTS OF PREDICTING PREMATURE BIRTH	356
79.	Syusyuka V., Kolokot N., Yershova O. ASSESSMENT OF THE PSYCHOLOGICAL STATE OF PREGNANT WOMEN WITH FETAL GROWTH RETARDATION	361
80.	Vasylyeva K., Bezeha O., Yemchenko Y. EXPERIENCE OF TREATMENT FOR FUNGAL DISEASES IN POLTAVA REGION	364
81.	Геник Н.І., Перхулин О.М., Жукуляк О.М., Бігун Р.В. ОСОБЛИВОСТІ БІОТОПУ СТАТЕВИХ ШЛЯХІВ У ЖІНОК ІЗ ІСТМІКО-ЦЕРВІКАЛЬНОЮ НЕДОСТАТНІСТЮ ТА АНОВУЛЯТОРНИМ НЕПЛІДДЯМ В АНАМНЕЗІ	369
82.	Жураківський В.М., Пахаренко Л.В., Басюга І.О., Ласитчук О.М., Моцюк Ю.Б. ПЕРСПЕКТИВИ КОРЕКЦІЇ ЛІПІДНОГО ОБМІНУ У ЖІНОК З ФІБРОМІОМОЮ МАТКИ ТА ОЖИРІННЯМ	372
83.	Каспрук Н.М. МОЖЛИВОСТІ НАТРІЮ ТІОСУЛЬФАТУ В ЛІКУВАННІ АЛЕРГІЇ	375

THE SPECIAL ASPECTS OF THE ALVEOLAR PROCESS DEFECTS RECONSTRUCTION FOR CHILDREN WITH CONGENITAL DEFECTS OF THE MIDDLE FACE

Kulynych Mariya
Ph.D. student, MD
Uzhhorod National University

Mochalov Iurii
D.Med.Sc., Ph.D., MD, Professor
Uzhhorod National University

Congenital malformations of the upper lip and palate (*hereinafter* – CL/P), including clefts of the alveolar process on the upper jaw, are common congenital malformations in humans. The birth of a child with a cleft upper lip and palate is accompanied by a number of medical and social problems which, according to many authors, determine the need for continuous improvement of rehabilitation methods for this group of patients. The set of treatment and rehabilitation measures which the patient should receive is complex, multi-stage and long-term [1,8].

Approximately 60.0% of children with congenital clefts of the upper lip and palate also have a defect of the alveolar process. Therefore, the procedure to eliminate the alveolar process defect is required for all children with CL/P but the methodic and surgery technique depends on a number of factors: the patient's age, size and anatomical and topographic conditions of the defect and the choice of graft material [7,1].

The interests of scientists and clinicists in this aspect is due to the fact that in cases of eliminating the alveolar process defect we not only restore the anatomical integrity but also solve other important tasks – to fix the stability of unfused fragments of the upper jaw and support nasal structures, to eliminate the depression of the lip`s soft tissues, to create the favorable conditions for the development of not only the upper jaw but also the entire middle face, to stabilize the results of orthodontic treatment, to create the conditions for future orthognathic surgery [9].

However, despite the long history of the treatment development for children with CL/P, to date there is no consensus on the timing of surgery and methods of surgical treatment, as well as the need for the use and choice of osteoplastic (graft) material. If these problems to be solved it would be possible to achieve optimal anatomical, cosmetic and functional results. It should be borne in mind that the presence of a defect at the level of the basal part of the alveolar process which leads to a violation of the shape and size of the basal part of the upper jaw is important in improving deformity of the upper jaw in children with congenital facial defects during the orthodontic treatment [6,8].

As may be determined from the literature, 80.0-90.0% of children with CL/P have pathological changes in the ENT organs which are due to the anatomical structure of the nonunion of the palate and the close connection of the oral and nasal cavities.

Prolonged adaptation of the body leads to the development of pathological changes in the tissues of the walls of the mouth, nose and throat. Diseases of the ear, throat and nose among CL/P patients are 10 times more common than among children with the whole palate. Deformation of the nose is noted in 70.0% of patients, disorders of the structure of the nasal cavity – in 82.5%, diseases of the nasal cavity and paranasal sinuses – in 89.9%, impaired respiratory function of the nose – in 44.5%, curvature of the nasal septum - at 82.5%. The presence of oronasal junction promotes the penetration of oral fluid, microflora and food debris into the nasal cavity, which leads to inflammation of the nasal mucosa [2].

To date, surgery has a significant list of approaches and techniques for performing each of the stages of the alveolar process defect improvement. They are combined with a choice of equipment and adequate material for bone transplantation (grafts), age of patients. In addition, the treatment raises several questions, first, about the feasibility of such ancillary interventions as orthodontic enlargement of the upper jaw, and secondly, when it should be carried out – before or after alveoloplasty? Also, the children with CL/P after surgery – such as cheiloplasty, velo- and palatoplasty – often have secondary scarring deformations of the upper lip, nose, upper lip, hard and soft palate. These deformations are distinguished by types and severity. The cleft type itself affects the severity of the deformity, namely the presence of a defect in the alveolar process and its size. The bone basis of an alveolar shoot of an upper jaw is the base for all soft tissue structures surrounding it [3,5].

Restoration of jaw function and morphology for children with CL/P is very important. The quality of upper jaw alveolar process reconstruction depends on the osteogenic potential and regeneration of the graft in the alveolar process. The main condition of successful functional and anatomical repair of an upper jaw is correct preparation of defect of the alveolar process which consists in correct calculation of sufficient quantity of an autogenous bone graft. At the same time, it is necessary to use healthy mucoperiostal flaps which should properly cover a placed graft. Bone plasty of the alveolar process of the upper jaw during changeable dentition when the transverse growth of the upper jaw is almost complete reduces the risk of impaired bone growth [4,10].

Conclusions. Thus, the problem of rehabilitation the children with congenital facial defects is complex and multicomponent. Reconstruction of residual and secondary defects of the alveolar process among patients with congenital malformations of the upper lip and palate is an important step in restoring the anatomy, function and aesthetics of the middle face and, accordingly, comprehensive rehabilitation of the patient.

References:

1. American College of Surgeons. User Guide for the 2014 ACS NSQIP Pediatric. 2015. URL: www.facs.org/?/media/files/qualityprograms/nsqip/peds_acs_nsqip_puf_userguide_2014.ashx.

2. Jubbal KT, Zavlin D, Olorunnipa S, Echo A, Buchanan EP, Hollier LH. Comparing Plastic Surgery and Otolaryngology Management in Cleft Care: An Analysis of 4,999 Cases. *Craniomaxillofacial Trauma & Reconstruction.* 2017;10(4):271-7. doi:10.1055/s-0037-1601429

3. Millard DR, Latham R, Huifen X, Spiro S, Morovic C. Cleft lip and palate treated by perisurgical orthopedics, gingivoperiosteoplasty, and lip adhesion (POPLA) compared with previous lip adhesion method: a preliminary study of serial dental casts. *Plast Reconstr Surg.* 1999; 103: 1630–44.

4. Nguyen C, Hernandez-Boussard T, Davies SM, Bhattacharya J, Khosla RK, Curtin CM. Cleft palate surgery: an evaluation of length of stay, complications, and costs by hospital type. *Cleft Palate Craniofac J.* 2014; 51(04): 412–9.

5. Paine KM, Tahiri Y, Wes AM. An assessment of 30-day complications in primary cleft lip repair: a review of the 2012 ACS NSQIP. *Pediatric Cleft Palate Craniofac J.* 2016; 53 (03): 283–9.

6. Salyer KE, Bardach J. Salyer & Bardach's Atlas of Craniofacial and Cleft Surgery. Philadelphia: Vol 2: Cleft Lip and Palate Surgery; Lippincott-Raven; 1999.

7. Salyer KE, Rozen SM, Genecov ER, Genecov DG. Unilateral Cleft Lip—Approach and Technique. *Semin Plast Surg*. 2005;19(4): 313-28. doi:10.1055/s-2005-925904.

8. Shetye PR. Facial growth of adults with unoperated clefts. *Clin Plast Surg.* 2004; 31:361–71.

9. Strauss RP. The American Cleft Palate-Craniofacial Association (ACPA) Team Standards Committee. Cleft palate and craniofacial teams in the United States and Canada: a national survey of team organization and standards of care. *Cleft Palate Craniofac J*. 1998; 35(06): 473–80.

10. Vlastos IM, Koudoumnakis E, Houlakis M, Nasika M, Griva M, Stylogianni E. Cleft lip and palate treatment of 530 children over a decade in a single centre. *Int J Pediatr Otorhinolaryngol*. 2009;73 (07): 993–9.