

# STUDY AND EDUCATION OF PERSONS WITH SPECIAL EDUCATIONAL NEEDS

---

UDC 376.37

BBC Ч457.091

GSNTI 14.29.05, 14.29.09

Code VAK 13.00.03

**T. Y. Mos'pan, O. V. Ginter**

Moscow, Russia

## MODERN APPROACHES TO LOGOPEDIC SUPPORT FOR YOUNG CHILDREN WITH CONGENITAL CLEFT LIP AND PALATE

**Abstract.** The article presents the basic contradictions which are associated with the tactics of early surgery for children with congenital cleft lip and palate and non-availability of timely early logopedic aid to such children. The article describes the problem of providing early logopedic support in the complex treatment of children with congenital cleft lip and palate during rehabilitation period. Lack of universal guidelines for logopedic support for not only kids but also for their parents in order to achieve maximum results during the course of speech therapy makes the problem especially urgent.

**The purpose of this article** is to determine variable terms of training logopedic counseling sessions for parents of young children with congenital cleft lip and palate during clinic observation. The common territory of our county and the development of telecommunications technologies, as well as their successful implementation in the medical sphere and education, enable continuous observation of the patient. The introduction of logopedic support into a practical logopedic support observation chart would facilitate disorder treatment and provision of logopedic aid at the place of residence of the patient.

In 80 % of cases, children with congenital cleft lip and palate have multiple pathologies of other organs and systems, especially organ of hearing (ear), because of the anatomic causes of defect that can lead to neuro-sensory hearing loss and psychomotor underdevelopment. Therefore the logopedist should pay special attention not only to the violation of articulatory aspect of speech, but also to the specific features of the child's psychological development: auditory attention, visual concentration, motor responses, and cognitive development.

The inclusion of parents in logopedic work at early stages and their training to perform the necessary manipulations and exercises would ensure continuity and shorter terms of the child's logopedic training, improve the psycho-emotional climate in the family, and promote self-sufficiency and lesser dependence on specialists. The parents' training algorithm would allow achieving greater effectiveness of rehabilitation of children with congenital cleft lip and palate.

**Keywords:** children with congenital cleft lip and palate; logopedic support; early age, logopedic work; maxillofacial pathology; congenital cleft lip and palate; ana-

tomical and physiological disorders.

**About the author:** Mos'pan Tat'yana Yakovlevna, Logopedist, Post-graduate Student of Moscow City Teachers' Training University.

*Place of employment:* Scientific Center for Children's Health (Moscow, Russia).

**About the author:** Ginter Ol'ga Valer'evna, Maxillofacial Surgeon, Candidate of Medicine.

*Place of employment:* Scientific Center for Children's Health (Moscow, Russia).

Medical and psycho-pedagogical rehabilitation of children with congenital disorders of speech organs is a complex and multilateral issue. At present, the leading Russian specialized centers use the tactics of early surgical treatment to repair congenital cleft lip and palate (CCLP).

The following conditions facilitate early surgery:

- improvement of the level of qualified medical aid for infants;
- development of the methods of surgical and orthodontic treatment before and after surgery;
- favorable diagnoses for children after surgery even in cases of severe multiple pathology;
- better logopedic support for children of different ages;
- creation of a favorable social environment for the child's development.

The necessity and desirability of timely creation of special developing conditions for children with disabilities of different etiology and degree of manifestation and the beginning of rehabilitation-pedagogical work at an early age have been stressed by many researchers whose works are devoted

to the study of children with various developmental disorders, and namely with:

- organic CNS lesions (M. V. Bratkova, E. A. Ekzhanova, etc.);
- deviations in psychophysical development during the first years of life (S. B. Lazurenko, N. V. Obukhova), including infants (I. A. Vyrodova);
- motor disorders (E. F. Arkhipova, O. G. Prikhod'ko, etc.);
- early disorders of emotional development (O. Arshatskaya, E. R. Baenskaya, N. N. Libling, etc.);
- hearing disorders (N. M. Nazarova, V. Pelymskaya, N. D. Shmatko);
- visual impairments (M. Brambring, M. E. Bernadskaya, O. V. Paramey, L. I. Fil'chikova, etc.);
- speech underdevelopment (E. A. Arkhipova, A. B. Balakireva, E. L. Cherkasova, etc.);
- multiple disorders (A. V. Apraushev, T. A. Vlasova, M. V. Zhigoreva, etc.).

Congenital maxillofacial pathology influences the early physical

development of the child because of nutrition and breathing disorders. Cleft lip and palate causes frequent otitides and respiratory illnesses which have a negative impact on the somatic status of the child and, consequently, on his general and cognitive activity [5; 11; 16].

In her dissertation, N. V. Obukhova registered multiple polymorphic developmental disorders in 42% of children with congenital cleft lip and palate during the first year of life; they are usually manifested in the form of psycho-motor underdevelopment which could be diagnosed through behavioral responses in the framework of a set communicative situation [9].

Children with congenital defects of articulation organs typically display pre-speech underdevelopment, delayed formation of verbalization and phrasal speech, lagging behind time in accumulation of normal vocabulary volume and in formation of grammatical speech (T. Yu. Derunova, T. V. Volosovets, G. N. Solomatina, etc.). Affected pronunciation is the most significant manifestation of the defect (V. E. Agaeva, A. S. Balakireva, A. V. Dorosinskaya, N. I. Serebrova, E. A. Soboleva, etc.).

Children with congenital developmental disorders of different degree of manifestation, especially in the maxillofacial zone, are easily susceptible to emergence of secondary impairments in their psycho-

logical health and need special attention on the part of psychologists, pedagogues and social workers to avoid or maximally neutralize the impact of the primary defect. As long as children with CCLP are patients with various multiple pathology of different degree of manifestation, treatment of such patients needs coordinated simultaneous work of a group of specialists: pediatrician, neurologist, orthodontist, maxillofacial surgeon, otolaryngologist, logopedist, defectologist, psychologist and social worker. Thus, the complex approach determines close interdisciplinary ties in a team of specialists and demands integration of medical and pedagogical methods while designing an individual program of abilitation of a child with CCLP [1; 3; 8].

In order to provide timely aid for a child with CCLP, it is necessary to guarantee their in-patient observation at a profile specialized center offering medico-rehabilitation treatment and psychopedagogical support from the first days of the baby's life, and to inform the family as early as the two first months of the infant's life about the program of abilitation and accessible forms of aid in the region of the family's residence.

Surgical charts are generally used today in Western European countries, USA and Canada. In our country, medical observation of children with CCLP is undertaken

by specialists of profile medical institutions from birth till the age of 18 [3; 12; 13]. At present, there are no formally adopted standards of treatment of children with the given pathology. Different healthcare centers have their own surgical charts corresponding to the methods worked out in the given institution. These methods may differ radically in timetabling surgical treatment.

Medical check-ups by a maxillofacial surgeon and orthodontist are scheduled once every 6-12 months during dispensary observation, but these procedures may be re-scheduled by the medical institution specialists. Logopedic counseling prior to uranoplasty is optional and is sometimes "overlooked" by both the pediatrician and the little patient's parents. Not all patients could be operated on at the pre-determined time. The operation can be performed later, not at 10-12 months of age but at 18-24 or even 24-30 months depending on many parameters, factors and reasons. That is why the parents should get detailed advice of a specialist-logopedist as early as the first year of the child's life in order to realize the peculiarities of speech development of such children, how to interact with them and what and how they should be taught.

The work of the logopedist at an in-patient facility for children with maxillofacial zone pathology presupposes observation of the child

before and after surgery, teaching children and their parents doing individual complex exercises taking into account the child's individuality and abilities, and compiling guidelines for logopedic treatment of the patient during pre- and post-surgery periods.

Two or three logopedic counseling training sessions are carried out after the planned operation and up to the time of the child's discharge from hospital for various reasons (edema of the tissues or gentler daily physical load). During training, the logopedist selects exercises which would help the child to get used to the "new" anatomic constitution of the oral cavity, teaches the mother the elements of massage aimed at motion activation of the post-operation soft palate tissues, and teaches how to follow the guidelines at home.

After discharge from the in-patient clinic where the operation has been performed, the parents take the child home and are advised on continuing logopedic instruction at the place of residence and are detailed on carrying out daily exercises which they learned at the hospital.

But according to the parents' questionnaire held during the second round of counseling, the advice and recommendations given during the training session at the clinic are generally neglected.

90% of parents caring for children with CCLP had problems with

carrying out the recommendations. The parents gave several reasons why the recommendations were completed partially or were totally neglected:

- the parents are afraid to harm the child as they don't know well enough how to perform exercises;
- the parents need to be reassured that they do the exercise correctly;
- the parents expect fast changes and are not prepared for everyday logopedic work.

And even if an insignificant number of parents perform the logopedist's instructions at the beginning, some time later they need a dynamic assessment of the child's state and a confirmation that what they have done is beneficial to the child.

Inopportune logopedic aid at the place of residence may be also connected with a number of other factors:

- remoteness of specialized centers from the place of residence;
- lack of specialists working with the children of this category;
- parents' ignorance about accessible forms of assistance;
- absence of guidelines about the time and duration of rehabilitation programs;
- lack of cooperation between organizations and specialists taking part in rehabilitation treatment of patients with CCLP.

Thus, the present state of provision of psycho-pedagogical support for children with CCLP cannot be

considered satisfactory because no models of logopedic support between periods of operative treatment have been worked out and there is no continuity in the process of the child's transition from one institution to another.

In spite of achievements of the modern medicine in performing early surgical treatment for CCLP, the importance of logopedic training of children and their parents for preservation of positive results of operative treatment and prevention of deterioration of defect is underestimated. Timely logopedic aid would facilitate the child's treatment optimization and formation of the necessary preconditions for typical speech development.

It is common knowledge that the results of logopedic aid depend to a great extent on the parents' participation in the rehabilitation process (A. S. Balakireva, T. V. Volosovets, G. V. Chirkina). As long as the parents' potential is not realized because of lack of knowledge, it is necessary to instruct the parents and actively involve them in the rehabilitation process at a very early stage. Many researchers (O. B. Polovinkina, N. Sh. Tyurina, O. V. Yugova, etc.) attract attention to the active involvement of the parents in the rehabilitation process and reconsidering the forms and improvement of methods of psycho-pedagogical work with the family. That is why we propose to introduce logopedic training consultations in the period of dis-

pensary observation the number and duration of which are fixed in a logopedic support observation chart.

Taking into account the parameters of formalized requirements to the child's skills and habits recommended for dynamic diagnostic observation of patients at an early age as described in the works by E. F. Arkhipova and N. M. Aksarina (for children from 2 to 13 months of age) and K. L. Pechora, G. V. Pantyukhina, and L. G. Golubeva (for patients aged 13-36 months) we determined and fixed the time of obligatory diagnostic and instructive consultations in a specially designed logopedic support observation chart.

The logopedic support observation chart includes an individual program of formation of basic skills for active development of the articulatory aspect of speech and is made up taking into account recommendations of a maxillofacial surgeon, orthodontist, neurologist and psychologist depending on the child's individual features.

In view of the fact that many patients live far from the medical institution, on-line counseling may be provided for them. If the parents cannot be present at regular logopedic sessions, instruction of the parents should be carried out in the form of training consultations 3-4 times a quarter. And the specialist's recommendations about the individual program accomplishment may be sent by e-mail.

So, we recommend carrying out

10 logopedic training consultations during early childhood:

- during the first year of life – the 1<sup>st</sup> training consultation is scheduled between the ages of 3 and 6 months; the 2<sup>nd</sup> training consultation – between the ages of 9 and 12 months.

*Instruction of the parents at this age of the child* is organized along the following lines: development of the infant's visual and hearing responses, motor activity, emotional response, vocal responses and babbling sequences; teaching elements of massage of the lips, cheeks, tongue and palate – if there are medical reasons for it; formation of feasible motor skills articulation movements with the help of passive or passive-active techniques (protruding the lips – “a kiss”, holding flat objects with closed lips, putting the tongue out to lick up “thick” drops from a spoon, plate, etc.), stimulation of *velopharyngeal ring* muscles by sipping, teaching how to drink from a cup at the age of 6 months; teaching deep physiological breathing to enlarge the volume of inhaled and exhaled air, phonation breathing (lengthening babbling sequences during “voice roll-calls”); formation of social gestures and first meaning-related words, and also teaching the mother developing interaction with the child [4].

- From the 1<sup>st</sup> year of life till the age of 2, logopedic work should begin as soon as possible after surgery.

Logopedic support is performed

in the form of individual lessons and training consultations under the dynamic observation of a logopedist every three months: the 3<sup>rd</sup> training consultation is held between the ages of 1 year 1 month and 1 year 3 months; the 4<sup>th</sup> training consultation – between the ages of 1 year 4 months and 1 year 6 months; the 5<sup>th</sup> training consultation – between the ages of 1 year 7 months and 1 year 9 months; the 6<sup>th</sup> training consultation – between the ages of 1 year 10 months and 2 years.

*During this period, logopedic work is carried out in the following directions: development of phonemic awareness; activation of speech organs (passive and passive-active articulation gymnastics [6]); formation of oriented oral exhalation and airflow, development of phonation breathing (enforcement and prolongation of feasible sound-imitations: “У-у-у” – three cars, “Э-э-э” – three bears); practicing articulatory positions of the early ontogenesis sounds (the vowels А, И, О, У, Э and the consonants П, Ф, Т, Л', М, Б [5; 14]); formation of two word phrase imitation skills. After the age of 1 year 6 months *logopedic work is aimed* at developing physiological breathing and vocal apparatus; perfection of previously learnt sounds and formation of articulatory positions of the next group of early ontogenesis sounds (Н, Д, К, Х, Ы, С'); development of auditory attention and comprehen-*

sion of sentences with prepositions (в, на, за, к, с); formation of question words usage skills (кто? что? куда? где?); stimulating commentary of familiar events with commonly used words containing correctly pronounced sounds. Work on syllabic structure of words with open syllables (папа, пони, Филя, вода, липа, малина, etc.) and formation of skills of building three word phrases with prepositions (Филя в доме. Киса на диване, — etc.) is continued [7].

- From the 2<sup>nd</sup> to the 3<sup>rd</sup> year of life *logopedic work* is organized in the form of individual classes and training consultations.

Training logopedic consultations are held also once every three months: the 7<sup>th</sup> training consultation takes place between the ages of 2 years 1 month and 2 years 3 months; the 8<sup>th</sup> training consultation – between the ages of 2 years 4 months and 2 years 6 months; the 9<sup>th</sup> training consultation – between the ages of 2 years 7 months and 2 years 9 months; the 10<sup>th</sup> training consultation – between the ages of 2 years 10 months and 3 years. On condition of successful acquisition of recommendations after the age of 2 years 6 months, the logopedist may ask to come to the next consultation 6 months later, i.e. at the age of 3.

*At this age, logopedic work* is organized along the following lines: improvement of auditory attention and phonemic awareness; develop-

ment of random movements of the vocal apparatus motor skills (active articulatory gymnastics); teaching to differentiate between nasal inhalation and oral exhalation, formation of oriented airflow; development of phonation breathing and prolongation of the phrase during one oral exhalation (*Поля полет. Поля полет поле*); practicing “basic sounds” for training the next group of sounds, automation of the acquired sounds in independent speech [14]; formation of ability to use the voice pitch and intensity in imitation (using well known fairy tales for dramatization). Serious attention is also paid to the work on developing syllabic word structure, enrichment of vocabulary and mastering parts of speech (adverbs, pronouns, and adjectives), formation of grammar skills of agreement between the words in a sentence, development of dialogic speech (for this end, it would be necessary to stimulate the child to listen to short stories without visual support and to answer questions on the content, ask questions on one’s own, etc. [6; 7; 10; 15]).

During the period of logopedic support, it is necessary to teach the mother or her substitute adequate methods of rehabilitation work corresponding to psycho-physical development of the child at an early age. In case of on-line support, the methods and techniques explained by the specialist should be tested by

the parents upon themselves, and after their proper acquisition the parents together with the child demonstrate their application and performance to the specialist. Independent consolidation can be practiced using the tasks which have been completed correctly and have been approved by the logopedist.

Thus, introduction of the logopedic support observation chart involving parents in the program of training at an early age can facilitate significant improvement and normalization of speech of a child with CCLP and prevent the risk of secondary disorders of psychological development, which would make it possible to carry out the whole complex of logopedic rehabilitation measures in the shortest time possible.

#### References

1. Agaeva, V. E. Korreksionnaya rabota so starshimi doshkol'nikami pri rinolalii s uchedom rechevoy i nerechevoy simptomatiki / V. E. Agaeva, T. Ya. Mos'pan // *Sovremennye problemy spetsial'noy pedagogiki i spetsial'noy psikhologii : materialy nauchno-prakticheskikh konferentsiy studentov, aspirantov, soiskateley i prakticheskikh rabotnikov «Dni nauki MGPU — 2011» / sost. E. V. Ushakova, Yu. A. Pokrovskaya. — M., 2011.*
2. Aksarina, N. M. Vospitanie detey ran nego vozrasta / N. M. Aksarina. — 3-e izd., ispr. i dop. — M. : Meditsina, 1977.
3. Andreeva, O. V. Poetapnaya reabilitatsiya detey s vrozhdennoy rasshchelinoy verkhney guby i neba / O. V. Andreeva // *Vestn. Chuvash. un-ta. — 2012. — № 3.*
4. Arkhipova, E. F. Rannyya diagnostika i korrektsiya problem razvitiya. Pervyy god zhizni / E. F. Arkhipova. — M. : Mozaika-Sintez, 2012.



5. Balakireva, A. S. Logopediya. Rinolaliya / A. S. Balakireva. — M. : V. Sekachev, 2012.
6. Budennaya, T. V. Logopedicheskaya gimnastika : metod. posobie / T. V. Budennaya. — SPb. : DETSTVO-PRESS, 2001.
7. Veraksa, N. E. Ot rozhdeniya do shkoly. Primernaya osnovnaya obshcheobrazovatel'naya programma doshkol'nogo obrazovaniya / N. E. Veraksa, T. S. Komarova, M. A. Vasil'eva. — 3-e izd., ispr. i dop. — M. : Mozaika-Sintez, 2012.
8. Nelyubina, O. V. Kliniko-anatomichekoe obosnovanie khirurgicheskogo lecheniya detey s vrozhdennoy rasshchelinoy guby i neba : avtoref. dis. ... kand. med. nauk / Nelyubina Ol'ga Valer'evna. — M., 2012.
9. Obukhova, N. V. Osobennosti razvitiya mladentsev s vrozhdennoy rasshchelinoy guby i neba / N. V. Obukhova // Spetsial'noe obrazovanie. — 2015. — №4.
10. Pechora, K. L. Deti rannego vozrasta v doshkol'nykh uchrezhdeniyakh : kn. dlya vospitatel'nykh detskogo sada / K. L. Pechora, G. V. Pantyukhina, L. G. Golubeva. — M. : Prosveshchenie, 1986.
11. Soboleva, E. A. Rinolaliya / E. A. Soboleva. — M. : AST, 2006.
12. Tokarev, P. V. Osnovnye algoritmy reabilitatsii detey s vrozhdennoy rasshchelinoy guby i neba, primenyaemye v klinike ChLKh DRKB MZ RT [Elektronnyy resurs] / P. V. Tokarev, O. A. Mayakov, M. A. Satrudinov. — Rezhim dostupa: <http://mfvt.ru/osnovnye-algoritmy-reabilitatsii-detey-s-vrozhdennoy-rasshchelinoy-guby-i-neba> [Elektronnyy aemye-v-klinike-chlx-drkb-mz-rt/].
13. Tsyplakova, M. S. Osnovnye printsipy kompleksnoy reabilitatsii detey s vrozhdennymi rasshcheliniami guby i neba [Elektronnyy resurs] / M. S. Tsyplakova, Yu. V. Stepanova, E. A. Ponomareva, M. B. Trushko, E. S. Kerod. — Rezhim dostupa: <http://www.turner.ru/face.html>.
14. Fomicheva M. F. Vvedenie v logopediyu: materialy dlya prakticheskogo usvoeniya sistemy fonem russkogo yazyka : ucheb. posobie dlya stud. i slushateley kursov perepodgotovki i povysheniya kvalifikatsii / M. F. Fomicheva, E. V. Oganesyan. — M. : Izd-vo Mosk. psikhologo-sotsial'nogo in-ta ; Voronezh : Izd-vo NPO «MODEK», 2010.
15. Chirkina G. V. Rol' sem'i v korrektsii vrozhdennykh narusheniy razvitiya u detey / G. V. Chirkina // Al'manakh In-ta korrektsionnoy pedagogiki RAO. — 2004. — № 8.
16. Shakhovskaya S. N. Logopediya. Metodicheskoe nasledie. V 5 kn. Kn. 1. Narusheniya golosa i zvukoproiznositel'noy storony rechi. V 2ch. Ch. 2. Rinolaliya. Dizartriya : posobie dlya logopedov i stud. defektol. fak. ped. vuzov / S. N. Shakhovskaya, T. V. Volosovets, L. G. Paramonova i dr. ; pod red. L. S. Volkovoy. — M. : Gumanitar. izd. tsentr «VLADOS», 2006.