



ANALYSIS OF ANTHROPOMETRIC MEASUREMENTS OF THE CRANIOFACIAL AREA IN 8-9-YEAR-OLD CHILDREN WITH HEARING LOSS

Khaitova Dildora Sharipboevna

Independent competitor of the Department of Normal
Physiology of the Bukhara State Medical Institute

Summary

Deaf children often have underdeveloped or absent nasal bones, resulting in a small nose, thin nostrils, and a flattened midface with a flat bridge of the nose. People with this disorder usually also have widely spaced eyes (ocular hypertelorism), constricted eye openings (narrowed palpebral fissures), a small upper jaw (maxillary hypoplasia), and a small mouth with pursed lips. The craniofacial region was measured and analyzed: the shape of the skull, face and chest in children with hearing impairment in the Bukhara region. Data on anthropometric indicators of the head and face-jaw area of hearing-impaired children were collected in order to compare them with anthropometric indicators of healthy children.

Keywords: craniofacial area, hearing loss, children, morphology.

АНАЛИЗ АНТРОПОМЕТРИЧЕСКИХ ПОКАЗАТЕЛЕЙ ЧЕРЕПНО- ЛИЦЕВОЙ ОБЛАСТИ У ДЕТЕЙ 8-9 ЛЕТ С ТУГОУХОСТЬЮ

Хаитова Дилдора Шарипбоевна

Самостоятельный соискатель кафедры Нормальной
физиологии Бухарского государственного медицинского института

Резюме

Тугоухие дети часто имеют недоразвитые носовые кости или их отсутствие, что приводит к маленькому носу, тонким ноздрям и уплощенной средней части лица с плоской переносицей. У людей с этим заболеванием обычно также широко расставленные глаза (глазной гипертелоризм), суженные отверстия глаз (суженные глазные щели), небольшая верхняя челюсть (гипоплазия верхней челюсти) и маленький рот со сжатыми губами. Измерена и проанализирована краниофациальная область: форма черепа, лица и грудной клетки у детей с нарушением слуха Бухарской области. Собраны данные об антропометрических показателях головы и лица-челюстной области у детей страдающих тугоухостью с целью их сравнения с антропометрическими показателями здоровых детей. отстают по сравнению со здоровыми детьми.



Ключевые слова: краниофациальный область, тугоухость, дети, антропометрия.

ESHITISH QOBILIYATINI YO'QOTGAN 8-9 YOSHLI BOLALARDA KRANIOFASIAL SOHANING ANTROPOMETRIK O'LCHOVLARI TAHLILI

Xaitova Dildora Sharipboevna

Buxoro davlat tibbiyot instituti normal fiziologiya
kafedrası mustaqil izlanuvchisi

Annotatsiya

Kar bolalarda ko'pincha burun suyaklari kam rivojlangan yoki yo'q, buning natijasida kichik burun, ingichka burun teshigi va burunning tekis ko'prigi bilan tekislangan o'rta yuz paydo bo'ladi. Ushbu kasallikka chalingan odamlarda odatda keng oraliqda joylashgan ko'zlar (ko'z gipertelorizmi), siqilgan ko'z teshiklari (toraygan palpebral yoriqlar), kichik yuqori jag' (maksiller gipoplaziya) va lablari burmalangan kichik og'iz mavjud. Buxoro viloyatidagi eshitish qobiliyati zaif bolalarda bosh suyagi, yuz va ko'krak qafasining shakli o'lchandi va tahlil qilindi. Eshitish qobiliyatini yo'qotgan bolalarning bosh va yuz-jag' sohasining antropometrik ko'rsatkichlari ma'lumotlari sog'lom bolalar antropometrik ko'rsatkichlari bilan solishtirish maqsadida yig'ildi.

Kalit so'zlar: kraniofasiyal mintaq, eshitish qobiliyati, bolalar, antropometriya.

Relevance

According to the World Health Organization (WHO), hearing loss is one of the leading factors that can impair a person's lifestyle. 5.3% of the world's population is hearing impaired (WHO, 2012). According to statistics (2021) from the United Nations (UN), more than 5% of the world's population, or 430 million people, need rehabilitation to address "disabling" hearing loss (432 million adults and 34 million children). It is estimated that by 2050 more than 700 million people, or one in ten, will have disabling hearing loss. Hearing loss can be first diagnosed at any age. Hearing loss in children often leads to speech disorders and developmental delays, in particular in the craniofacial area (Yu.S. Osipov et al., 2016).

The craniofacial complex includes the head, face, and oral cavity and is the most distinctive of all human body structures, giving individuals unique features. Structures of the craniofacial complex such as the mandible, palate, temporomandibular joint (TMJ) and dentition offer valuable paradigms for studying development, structure, and function (Y.V. Kalincheva, 2011). The distinctive facial features of people with craniofacial deafness syndrome are the result of various



anomalies in the development of the skull and face. Deaf children often have underdeveloped or absent nasal bones, resulting in a small nose, thin nostrils, and a flattened midface with a flat bridge of the nose. People with this disorder usually also have widely spaced eyes (ocular hypertelorism), constricted eye openings (narrowed palpebral fissures), a small upper jaw (maxillary hypoplasia), and a small mouth with pursed lips.

Purpose of the Study

The purpose of this study was to measure and analyze the indicators of the physical development of the craniofacial complex in children with hearing loss aged 8-9 years.

Research Methods

The study was conducted in 50 children aged 8-9 years with hearing loss, students of boarding school No. 123 of the Bukhara region, indicators of the physical development of the craniofacial complex were measured - the shape of the skull was determined: longitudinal diameter, transverse size, head girth, transverse forehead size, height or vertical diameter, determined by the size of the base of the skull, length of the base of the skull, width of the base of the skull, Face: zygomatic diameter, mandibular diameter, lower angle. jaws, morphological face height, physiological face height, nose height, nose width, external orbital width, interorbital width, height of the mucous part of both lips, mouth width, Chest: body length 1. standing height, 2. sitting height, body weight.

Research Results

	Indicators of physical development	first examination(sm)
	Determining the shape of the skull	
1	Longitudinal diameter	14.9± 0,3
2	Transverse dimension	15±1,5
3	head circumference	51±1
4	Transverse forehead size	13.6±1,3
5	Height or vertical diameter	12.6±2,3
	Determining the size of the base of the skull	
1	skull base length	15.3±4
2	Skull Base Width	11.5±1
	Face	
1	Cheekbone diameter	9.9±1.2
2	Mandibular diameter	7.1±1.1
3	Angle lower jaws	2.1±0.3
4	Morphological face height	8.5±0.2
5	Physiological face height	16.1±1.1



6	nose height	3.1 ± 1.1
7	Nose width	1.9 ± 0.6
8	Outer orbital width	9.2 ± 0.7
9	Interorbital width	1.7 ± 0.1
10	The height of the mucous part of both lips	2.1 ± 0.7
11	Mouth width	3.9 ± 2
	Breast	71 ± 10
1	Body length 1. standing height	121 ± 4
	2. sitting height	68 ± 4
2	body weight	29.1 ± 7



Fig.1.2. The process of measuring anthropometric indicators of the head and maxillofacial region in children with hearing loss

Conclusion

On the basis of a complex morphometric study, new data were obtained on the anthropometric parameters of the head and maxillofacial region in children with hearing loss, it was found that the anthropometric parameters of the head and maxillofacial region in children suffering from hearing loss lag behind compared to healthy children. With the data obtained, a computer program will be further developed to determine the lag of bone age from the passport age in children with hearing loss.



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