In group 1 in the perinatal period were observed isolated cases of diseases, symptoms of which are practically got better after the quickly symptomatic treatment.

In the 2nd group 15 (20.5 %) of children had mild disease. In the group 3, the picture was the exact opposite, Survivors of 46 children had severe complications: hypoxic-ischemic encephalopathy — in 5 (6.8 %), pneumopathy — in 6 (8.1 %), intrauterine growth retardation — 20 (20.7 %), congenital malformations — in 10 (27.0 %), cephalohematomy — in 2 (2.7 %), hematological disorders — in 3 (4.1 %). In the first 7 days in this group from various kinds of complications still died 20.3 % of newborns.

Conclusion. The signs of trouble are: low Apgar score at birth, lack or excess of weight, lack of or change in the nature of a child crying, rapid heartbeat, and the changes in muscle tone, impaired sucking and swallowing.

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Morphometric parameters of maxillodental at 3-year-old children with artificial and natural food

Abstract: To the article data are driven on the study of anthropometric parameters for the children of 3th summer age with an artificial and natural feed. The row of differences is shown in morphofunctional development for children at the different types of feed.

Keywords: maxillodental system, anthopometrical parameters, the physiognomical height of face, the morphological height of face, 3-year-old children.

Growth and development maxillodental system (MS) of each child appreciably depend on properties and the features received by it from parents, important role has also social status. The hereditary factor defines not only external shape of the child and its specific features, but sometimes and occurrence of some original reactions or hereditary illnesses. Growth and deve-lopment of MS are under the influence of set of interdependent factors [1; 2; 4]. In development of MS the kind of food of the child (artificial or natural) and social status of family [3; 5; 8] also has importance. One of the very first and basic functions of masticatory apparatus is suction act. Modern researches have shown that this act at natural and artificial feeding (AF) has essential differences. Under the influence of the loadings arising at suction, the corner of the bottom jaw changes, are formed articulate tubercle of temporomandibular joint, palatal arch. Natural feeding promotes formation of correct occlusion [2].

It is known that the child is born with so-called bird-beak jaw (prognathism) of newborn (bottom jaw is located on the back), and suction movements promote its moving forward and to correct formation. The act of suction also is a basis for formation of breath functions, occlusion and swallowing [5; 7; 8].

Wrong feeding leads to that at the child it is fixed mutual relation between jaws which is called "infantile" or «physiological retrogeniuses», at which the bottom jaw gets distal position. This results from the fact that movers of bottom jaw, and also the circular muscle of mouth and tongue muscle

insufficiently develop. In development of deformations of MS it also matters cha-racter of food [3].

Purpose of our research is to define anthopometrical parametres of face (APF) and corner of the bottom jaw (CBJ) at 3-year-old children with natural and AF with parents, and also AF children, which are in children's home (house of baby), conformity of the received results to compare to golden section principle.

Materials and methods. Research have been spent in kindergartens and in children's ho-me (house of baby). Children have divided into 3 groups. A kind of food of children (natural — 1st group), (artificial — 2nd group), and also children from children's home being on artificial food (3rd group) have defined by means of the special questionnaire which was filled with parents in a kindergarten and tutors in children's home. APF measured by special compasses and metre tape. CBJ defined goniometer at open mouth (Persin L. I., 1998).

For definition of occlusion condition plaster models at 20 boys and at 20 girls of 3 flight age with natural food, and as at 10 boys and at 10 girls of 3 flight age with AF and at 10 boys, 10 girls being on AF in children's home are removed. Statistical processing of the received results spent by means of standard methods of variation statistics with use of tables of R. B. Strelkova (1986).

Results of research and their discussion. Research have shown that the physiognomical height of face (PHF) at 3-year-old children of boys of 1st group of fluctuates from 16.2 up to 18.0 cm., on average 16.8 ± 0.19 cm. At 3-year-old girls varies from 15.5 up to 17.0 cm., on average — 16.2 ± 0.16 cm. Morphological height of face (MHF) at 3-year-old boys of 1st group fluctuates from 10.0 up to 12.0 cm., on average it is equal to 11.2 ± 0.22 cm., and at girls is in limits from 10.5 cm. up to 11.5 cm., on average 10.9 ± 0.11cm.

PHF at 3-year-old children (boys) of 2nd group fluctuates from 15.5 up to 17.5 cm., on average 16.3 ± 0.22 cm., and at girls from 15.0 up to 16.5 cm., on average 15.9 ± 0.16 cm. MHF at 3-year-old boys of 2nd group fluctuates from 10.0 up to 11.0 cm., on average it is equal to 10.5 ± 0.11 cm., and at girls is in limits from 9.5 cm. up to 11.0 cm, on average — 10.3 ± 0.16 cm.

PHF at 3-year-old male children of 3rd group fluctuates from 14.0 up to 16.0 cm., on average 15.3 ± 0.22 cm., and at girls from 13.7 to 15.0 cm., on average 14.7 ± 0.22 cm. MHF at 3-year-old boys of 3rd group fluctuates from 10.5 up to 12.0 cm, on average it is equal to 10.9 ± 0.16 cm., and at girls is in limits from 9.0 cm. up to 10.5 cm., on average 9.6 ± 0.16 cm.

In clinical practice it is accepted to study with division of face into top, middle and bottom parts: top — from border of scalp of forehead up to middle part of superciliary arches, middle — from the middle part of superciliary arches up to subnasal points, bottom — from sub-nasal points up to mental part. When these three sizes are equal — the face is considered ideal, corresponding to golden section principle.

For the description of ideal proportions of body of human, many norms and standards were offered, but the gold proportion defines its beauty. The gold proportion has been described for the first time in the 4th century B.C by Eukleides. He represented unique division of AB line into two pieces (AC and CB) in such manner, that division of AB into AC is equal to division of AC into CB. Result of this division is the number φ, equal to 1,618. Thus, the golden section is a parity of proportions at which whole so concerns the bigger part as the most part concerns to smaller [Shaparenko P. F., 1994]. The form at the heart of which construction lie symmetry and golden section combination, promotes the best visual perception and occurrence of sensation of beauty and harmony. Proportions of various parts of our body make the number very close to golden section. If these proportions coincide with value of number of Fibonachchi (1:1,618) exterior or body of the person is considered ideally combined [6].

MHF and their parity is resulted in table 1.

Table 1. – Morphometric parametres of face and their conformity to principle «Gold proportion»

Parametres of face	1st group		2nd group		3rd group	
	Boys	Girls	Boys	Girls	Boys	Girls
PHF	16.8 ± 0.19	16.2 ± 0.16	16.3 ± 0.22	15.9 ± 0.16	15.3 ± 0.22	14.7 ± 0.22
MHF	11.2 ± 0.22	10.9 ± 0.11	10.5 ± 0.11	10.3 ± 0.16	10.9 ± 0.16	9.9 ± 0.16
Height of the top part of face	5.6 ± 0.08	5.4 ± 0.07	5.5 ± 0.07	5.3 ± 0.07	5.1 ± 0.07	4.9 ± 0.08
Height of average part of face	5.5 ± 0.07	5.3 ± 0.06	5.4 ± 0.07	5.3 ± 0.06	5.1 ± 0.08	4.9 ± 0.08
Height of the bottom part of face	5.6 ± 0,07	5.4 ± 0.07	5.4 ± 0.06	5.2 ± 0.07	5.0 ± 0.08	4.8 ± 0.07
Fibonachchi number	1:1.60	1:1.617	1:1.61	1:1.612	1:1.60	1:1.619

Comparisons shows that at 3-year-old boys of 1st group, the parity of distance from tip of chin up to the top line of eyebrows (11.5 ± 0.20 cm.) to distance from the top line of eyebrows up to top (7.1 ± 0.14 cm.) is equal — 1:1.60. This parity is equal 1:1.617 at girls (10.9 ± 0.18 cm./6.7 ± 0.16 cm.). At boys of 2nd groups the parity of distance from tip of chin up to the top line of eyebrows (11.3 ± 0.15 cm.) to distance from the top line of eyebrows up to top (7.0 ± 0.13 cm.) is equal to 1:1.61. But at girls this indicator (10.8 ± 0.18 cm./6.7 ± 0.14 cm.) is equal to 1:1.612.

At 3-year-old boys of 3rd group, parity of distance from tip of chin up to the top line of eyebrows (10.6 ± 0.12 cm.) to distance from the top line of eyebrows up to top (6.6 ± 0.11 cm.) is equal to 1:1.60. At girls (10.2 ± 0.13 cm./6.3 ± 0.16 cm.) this parity is equal to 1:1.619.

CBJ jaw at 3-year-old boys of 1st group is equal on average — 118.0 ± 1.62° (right side), 119.5 ± 2.16° (left side), and at 3-year-old girls of this group — 116 ± 1.62° (right side), 119 ± 2.16° (left side). At 3-year-old boys of 2nd group CBJ from both parties it is almost identical, it is on average

equal to 122.5 ± 0.94 ^{0}, and at 3-year-old girls of 2nd group on average makes 121.0 ± 1.62 ^{0} (right side), 123.0 ± 1.08 ^{0} (left side).

At 3-year-old boys of 3rd group CBJ is on average equal to 123.1 ± 1.82 ^{0} (right side), 123.2 ± 1.82 ^{0} (left side), and at 3-year-old girls of this group on average makes 122.5 ± 0.94 ^{0} (right side), 123.2 ± 1.08 ^{0} (left side).

AF not only does not provide children with necessary quantity of nutrients, but also does not give high-grade functional loading on MS of growing organism, for which account there is backlog of some morphometric parametres of parts of human body.

Conclusions:

1. MHF and PHF at children with AF is less than at children with natural food. It is especially expressed at children from the children's homes, being on artificial food.

2. Parity of top, middle and bottom parts of the face at girls of all groups are closer to the rule of Gold Proportion, after comparison of boys. Middle part of face is more constant, than top (depends on the beginning of line of hair) and bottom (depends on term of eruption and quantity of teeth).

3. In all groups, the parity of parametres of parts of face is close to number of Fibona-chchi or parametres of a gold proportion. These parities are more authentic at 3-year-old girls in comparison of boys.

4. At 3-year-old children of both sexes and all groups basically meet the open form of occlusion where corners of the CBJ is more blunt (120–125^0), it is rare (5–6 %) neutral form where corners of the bottom jaw is more than 135$^{0.}$

5. CBJ is more blunt at 2nd and 3rd groups of children at of both sexes. It tells about backlog of formation of the bottom jaw. Besides, at all groups the corner of the bottom jaw on the left side is more blunt than the right side. This parametre testifies to more physical development of right side of the bottom jaw after comparison of left (right side is more functional in the masticatory act).

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Dynamics of proinflammatory cytokines using conventional ultrafiltration after cardiac surgery

Abstract: The work is devoted to the influence of ultrafiltration for manifestations of inflammatory response and the dynamics of proinflammatory cytokines in patients after cardiac surgery.

Keywords: cardiopulmonary bypass, ultrafiltration, inflammation, cytokines.

Introduction

Cardiac surgery and cardiopulmonary bypass (CPB) initiate a systemic inflammatory response syndrome [3, 7] that may lead to considerable postoperative mortality as well as complications such as bleeding, thromboembolism, fluid retention and temporary organ dysfunction [12]. This syndrome arises mainly due to contact between the blood and the artificial surfaces of the bypass circuit [10]. Attempts to prevent CPB-mediated inflammation by different methods are warranted, because a reduction in the inflammatory response may contribute to organ function protection and hence to improved recovery and