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HUMAN TYPOLOGICAL ASPECTS AND MAXILLARY-FACIAL AREA ASYMMETRY CONNECTIONS TO MANDIBULAR FRACTURES IN HSEEU «UMSA» UKRAINIAN STUDENTS

Asymmetry is maxillary-facial region feature which is expressed both under physiological and pathological conditions. Some literary data of Turkish dentists [3, 248–254; 8, 188–194] show higher level (approximately in 2 times and the difference is statistically significant) of traumatized permanent incisors among left-handers (13–17-year-old adolescents) than among right-handers. Left-handers had significantly higher risk on dental trauma. Unilateral clefts affinity has been confirmed for the left side, the proportion of left-sided clefts among left-handers are higher than that among right-handers. Another scientific work [5, 297–303] demonstrates handedness influence on ethmoid roof height. The incidence of persons who had a lower ethmoid roof on the right side was significantly greater among right-handers than among left-handers; the incidence of people who had a lower ethmoid roof on the left side was significantly greater among left-handers than among right-handers; and right and left ethmoid roofs were equal in all ambidextrous subjects. It is considered that for the total group and right-handed toothbrushers, buccal plaque and gingivitis was significantly increased on right contralateral teeth. At the same time, no specific pattern for plaque and gingivitis distribution by side was seen for left-handed toothbrushers [13, 23–28]. Data about decay injuries asymmetry have special importance for dentists. Different teeth injury rate is non-equal: maxilla teeth are injured more often with caries than mandible teeth. Incisives and canines are injured significantly more seldom than premolars and molars. It is interesting that maxilla and mandible teeth injury on the right and on the left are symmetrical and

are observed with equal rate. But at the same time, left canines are injured with decay more often in sinisters [9, 1–100].

Sinistral and dextral patients with gingivitis have peculiarities in T immune response namely T-lymphocyte subsets [7, 1–13]. According to flow cytometry findings, in both sinistrality and dexterity with gingivitis, CD4+ CD8+ lymphocyte values were under the normal value while the CD4/CD8 rate was within normal distribution interval. CD4+ lymphocyte values observed in the sinistral patients were found to be lower than those in the dextral patients. The difference between the CD8+ lymphocyte values in left-handed patients and that obtained in right-handed patients was not found to be statistically significant while the difference between the CD4+ lymphocyte values in left-handed patients and that obtained in right-handed patients was found to be statistically significant. In addition, the difference between the CD4/CD8 rate obtained in left-handed people was found to be very significant. Consequently, these findings suggested CD4+ lymphocyte value and CD4/CD8 rate was lower in sinistrality. Thus, sinistrality and dexterity may play an important role in local immune response in oral cavity.

We made also Egyptian dentists publications literary review which demonstrates also asymmetry connections with human typological aspects.

The work [6, 281–287] results describes that there exists a correlation between the skeletal dimensions and the absence of correlation between dental crowding and the same measurements and suggests that dental crowding is independent on skeletal measurements. Some studies think dental crowding as a caries risk factor, other works deny [4, 443–450]. There exists mandibular hypomobility after orthognathic surgery at Class III malocclusions [2, 1–1967].

Maxillary-facial area asymmetry often describes in age typological aspect. The results of the current study [11, 105–113; 12, 97–104] suggest that corticotomy-facilitated orthodontic tooth movement significantly reduces the total time of treatment. In addition, the incidence of apical root resorption and periodontal problems associated with orthodontic tooth movement were reduced. The incorporation of bone graft material significantly increased the alveolar bone density in adult patients. Anterior segmental maxillary osteotomy might be recommended as the treatment modality of choice in 17–35-aged patients with maxillary or dento-alveolar protrusion [10, 718–726].

The work about chin cup effects at class III malocclusions were performed in gender aspect [1, 957–962].

The investigation object was: 42 Ukrainian students of UMSA – (for 5 years) – with mandibular fractures.

We used following investigative methods: psycho-physiological methods for interhemispherical asymmetry individual profile assessment:

- 1) sinistrality in anamnesis;
- 2) dominant extremity;
- 3) dominant finger;
- 4) dominant eye;
- 5) probe with applauding;
- 6) Napoleon's probe.

As it is known, ambidexes can use both left and right hand. Real left-handers were born by left-handers and use their left hand. Real right-handers were born by right-handers and they use their right hand as a dominant one. Hidden or latent left-handers were born by one or two left-handers and use their left hand because of right hand or right hemisphere injury. Unreal left-handers were born by right-handers and they use their right hand as a dominant because of possible left hand or left hemisphere trauma.

The investigation results:

Mandibles fractures:

- Left-sided – 26 (23 are real left-handers and 3 are hidden left-handers);
- Two-sided – 4 (4 are ambidexes);
- Right-sided – 12 (7 are real right-handers and 5 are non-real left-handers);
- Total – 42.

Thus, we can do following conclusions:

1. Pathological processes frequency on the right and on the left is different
2. Pathological process side is determined greatly by the patient dominant extremity (particularly in maxillary-facial region and in oral cavity).
3. Left-sided pathological processes were observed in real and hidden (latent) left-handers; right-sided – in real right-handers and non-real left-handers. Two-sided processes existence and their localization on middle line may testify hidden left-handedness or ambidextrism.

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