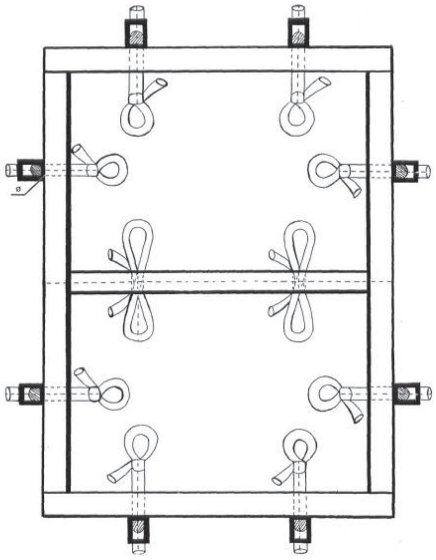
lateral walls and on the transverse framework of the frame, and polychlorinated tubes mounted in the holes, form 12 hinges, which are regulated by 8 clamps from the systems for intravenous injection.

The utility model that we made was tested in the study of 20 corpses of human fetuses aged from 4 to 10 months of fetal development. Other 20 corpses of human fetuses of the same age were examined using a prototype. Unlike the prototype, when using our model the fetus corpses were in the normal anatomical position after embalming, they did not have traces of coloration due to metal corrosion of the pins, which facilitated the production of high-quality gross specimens of organ complexes greatly s well as the further description of their structure and topography.



Consequently, the utility model of "fixing fetus and newborn corpses" proposed by us, allows fixing the anatomical gross specimens in the normal anatomical position facilitating further macroscopic, radiographic, anthropometric research and preparation.

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FEATURES OF MORPHOGENESIS OF THE MAXILLOFACIAL REGION STRUCTURES DURING THE 10th-12th WEEKS OF THE PRENATAL DEVELOPMENT

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Understanding the fundamental principles associated with the development of the structures of the maxillofacial region in the prenatal period of human ontogenesis can reveal, along with the general biological laws of morphogenesis, the emergence of their anatomical variants and congenital malformations that arise under the influence of exo- and endogenous factors in critical periods of embryogenesis, mainly at early stages of prenatal development of a human being (Tsyhykalo O.V. et al., 2017). We (Oshurko A.P, Oliinyk I. Yu., 2017) described the morphogenesis of the maxilla and separate structures of the maxillofacial region in human embryos and pre-fetuses aged 7-9 weeks of intrauterine development (IUD). The study was conducted within the framework of the planned complex research work “Morphogenesis patterns, structural and functional properties of tissues and organs in human ontogenesis” of the department of histology, cytology and embryology; department of pathological anatomy of Higher State Educational Institution of Ukraine “Bukovinian State Medical University” (state registration № 0116U002938).

The aim of the study the features of the morphogenesis of some structures of the human maxillofacial region in the dynamics of the 10th - 12th weeks of the prenatal ontogenesis. The study was conducted on 21 specimens of human pre-fetuses with 42.2-79.0 mm of crown-rump length (10-12 weeks of intrauterine development) using the methods of macroscopy, morphometry, manufacturing and microscopy of a series of sequential histological sections of human embryonic specimens and that of histochemistry. All studies were conducted in compliance with the substantive provisions of GCP (1996), European Convention on Human Rights and Biomedicine (of 04.04.1997), Helsinki Declaration of the World Medical Association on ethical principles of scientific medical research involving human (1964-2013), Orders of Ministry of Health of Ukraine № 690 dated 23.09.2009, № 616 dated 03.08.2012.

During the 10th week of the intrauterine development (IUG), one can clearly identify the newly formed branches of the mandible, formed by the hyaline cartilaginous tissue, in the structure of the human maxillofacial region. In the histogenetically modeled bony basis of the mandible it is possible to recognize the alveolar grooves well-filled with mesenchyma cells as well as blood vessels and nerves. The bone plates, forming the alveolar grooves, open towards the side of the tooth buds. Enamel bodies of both milk and permanent teeth are formed. In the soft tissues of the maxillofacial region, the formation of connective tissue structures continues, the mimic and chewing muscles can be differentiated. During the 11-12th weeks of the human IUG a complete separation of the oral and nasal cavities is finished, there is a further formation of the oral cavity vestibule, morphological transformations in the hard and soft

tissues of the organs and structures of the maxillofacial region continue to increase due to the establishment of reciprocal relationships between the various tissue rudiments, therefore, it can be argued that there is a formed bony basis of the upper and lower jaws; their surrounding connective tissue structures and chewing muscles differentiate rapidly. Based on the study of the histogenesis features of the maxillofacial region in the embryonic and pre-fetal periods of prenatal ontogenesis, one can conclude that on the completion of the 12th week of human IUG there are all prerequisites for an in-depth study to find out the features of the structure (density) and mineral composition of bone tissue of the human upper jaw in the dynamics of the fetal period of the prenatal ontogenesis.

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METHOD OF IMPROVED PHOTOGRAPHING OF GROSS ANATOMICAL SPECIMENS

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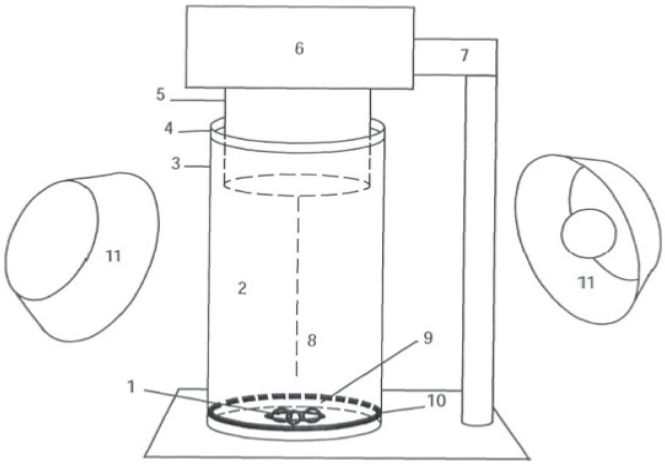
To photograph gross specimens, different light scattering devices, which create the optimal light-and-dark image of the gross specimen, are used. Gross specimens are most often photographed after they have been in a solution for some time, for example in formalin, that is, they have a wet surface. Therefore, studying photographing methods of gross specimens which would allow removing glare from their wet surface is relevant.

The aim of the study was to improve the way of photographing wet gross anatomical specimens by developing and using an anti-glare device for photographing gross anatomical specimens.

We have developed a utility model (Patent of Ukraine for the Utility Model No. 105953), which belongs to the field of medicine, namely anatomy, topographical anatomy and operative surgery, pathological anatomy, forensic medicine, morphology, and can be used for photographing wet anatomical gross specimens. We have also developed a method of photographing wet anatomical gross specimens by supplying scattered light from several light sources to the photographic object, modeling the illumination to the smallest amount of glare on the wet surfaces of an anatomical gross specimen and its photographing.

To improve the quality of the resulting images, we used an anti-glare device for photographing anatomical gross specimens. During the close-up of the wet anatomical drug (1), the light shaft (2) is fixed to the upper aperture (3) with a rubber band (4) around the lens (5) of the camera (6) fixed on the tripod (7). While macrophotographing a wet anatomical specimen (1) the light shaft (2) is fixed with the upper aperture (3) by means of a rubber band (4) around the lens (5) of the camera (6), fixed to the bed (7). The optical axis (8) of the photographic system is directed downwards. The gross specimen (1) is placed in the centre of the lower aperture (9) of the shaft at the level of the rigidity ring (10). The length of the shaft is adjusted according to the required distance between the lens and the specimen wrapping the lower or upper aperture in the form of a cuff. Illuminators (11) are placed around the shaft the lighting is modeled so that the least amount of glare on the wet surfaces of the anatomical gross specimen is observed in the viewfinder of the camera, and then it is photographed.



The proposed method of photographing gross anatomical specimens can reduce significantly the glare from the wet surfaces of gross anatomical specimens, control the illumination until the moment of photographing and obtain a detailed, precise image of the gross specimen.