9. PARTICULARS OF RADIATION DIAGNOSTICS IN POLYTRAUMATIZED PREGNANT WOMEN

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Introduction. In radiation diagnostics in polytraumatized pregnant women, the main research methods are radiography, USG and CT. The use of radiography and CT in pregnant women is controversial. A dose of ionizing radiation >100 mGy is considered a threshold for the occurrence of mutations in the fetus, and >200 mGy is considered unfavorable for the mother. The task of accurate diagnostics of injuries in polytraumatized pregnant women forced the use of radiation diagnostics in excess of the norm of the radiation dose. The purpose of the study is to determine the dose of absorbed ionizing radiation (mGy) in the accurate diagnosis of injuries in a polytrauma pregnant woman.

Case presentation. Clinical case of treatment of a pregnant woman E., 28 years old, who was involved in a car accident, as a passenger, 10 days before addressing IMSP IMU, in Ukraine. She addressed the following symptoms: headache, pain and edema of the facial region, pain when chewing, limitation of the opening of the mouth, pain in the region of the left arm. 20 weeks pregnant. At the primary examination the general condition was of medium severity, the neurological status was adequate. Breathing was nasal free, with a frequency of 14 / min. Stable hemodynamics (pulse 72 beats / min, blood pressure 120/90 mmHg). The local examination shows the facial asymmetry caused by the post-traumatic edema of the soft tissues in the left jugular region, where the skin was edematous, hyperemic, painful to the touch. The left arm was swollen and painful. She was examined by an oromaxillofacial surgeon, gynecologist, traumatologist, etc. The studies were performed using modern digital systems according to standard methods.

Discussion: At the hospitalization of the patient, the following imaging investigations were performed: radiography of the left forearm with plaster splint applied 10 days ago, an irradiation dose of 0.2 mGy (from 0.35 mGy), fracture of the radial bone in a typical place, secondary displacement of the fragments. Computed tomography (CT) of the head was performed with a radiation dose of 3.2 mGy (permissible 100-50 mGy), where the fracture of the paramedian mandible on the left was established with insignificant displacement of bone fragments. Fracture of the lower wall of the left maxillary sinus, with the displacement of bone fragments. Maxillary sinusitis on the left. Ultrasound of the small pelvis was also performed to examine the condition of the fetus. In conclusion: pregnancy in evolution within 29 weeks, amniotic waters in normal volume. Placenta inserted posteriorly, grade II of maturity, with a thickness of 33 mm. Cervical canal - 40 mm, closed. The clinical diagnosis of closed craniocerebral trauma, concussion has been established. Post-traumatic fracture of the mandible, unconsolidated, in the paramedian region on the left, condition after bimaxillary immobilization. Left radius fracture in typical place, immobilized with a plaster splint. Intrauterine pregnancy 22 weeks.

Conclusion. Following imaging investigations, the maximum dose of irradiation was 3.4 mGy, which is permissible to maintain the pregnancy and apply the necessary treatment to the pregnant woman, to reduce the pain syndrome. Regarding radiation in pregnancy, the suggestions of the National Council for Radiation Protection are ≤0.05 Gy (50 mGy), but the risk of teratogenicity from <0.1 Gy (100mGy) is very high.