

СРАВНИТЕЛЬНАЯ ВОЗРАСТНАЯ РЕНТГЕНАТОМИЯ КОСТЕЙ И СУСТАВОВ

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X-RAY ANATOMY BY COMPARISON OF BONES AND ARTICULATIONS IN THE AGE ASPECT

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The relevance of the topic. Radiography of bones and articulations is a type of beam diagnostics, the basis of which is the ability of human tissues to absorb a part of ionizing radiation, which is created with an X-ray apparatus and is diagnosed on the X-ray film or on the digital media. Anatomical objects, differing in density within 10-20%, are visualized on the X-ray photograph.

It's a proven fact that Radiography allows to evaluate external and internal peculiarity of bones. We have ascertained in the course of research, that it is permissible to do the X-ray already at the end of the second month of an antenatal life, when ossification centers arise in the cartilage.

It's known, that Radiography is used for diagnostics of various diseases- osteoporosis, osteochondrosis, arthrosis, platypodia, and also open and closed fracture, damage to the joints. The X-ray examination needs no special training.

Roentgenologists use the lowest dose of irradiation for the desired results obtaining, and duration of X-rays influence on the body, in case of usual radiography, doesn't exceed a few milliseconds.

It has been discovered, that it's possible to ascertain the dependence of the structure of bones on the condition of the nervous and cardiovascular systems, muscle activity. According to the fact, physically developed men's bones become more dense, protrusions, bumps and pits, to which muscles are attached, are apparent on the bones' surface. The more muscles are developed, the more preferable the insertion of the muscles to the bones is. That's why adults' relief of the bone is more noticeable, than children's, and men's relief of the bone is more noticeable, than women's. And on the contrary, the bones of physically weak developed body have smoother and more fragile state on the radiograph.

It has been determined, that X-ray pattern of bones of the elderly person acquires characteristic features. Signs of consenescence are well traced on the radiograph of spine and wrists: some people after 50 years old, the other – after 30. Bones become more transparent and

articular surface of bones' heads deform (a round figure disappear, corners appear) on the radiograph in osteoporosis.

With suspected osteoporosis densitometry is performed. Densitometry is a kind of X-ray examinations, which allows determining the mineral density of bone tissue. Densitometry is performed before treatment and one year after.

It has been determined, that due to excessive lime deposits in the adjacent bone and soft tissues, the relief of the bone increases, exposing the bone growths - osteophytes become visible, amethystoglossa articular cartilage.

Conclusion. Thus Röntgenography is a necessary tool method of research, which excludes various pathology of bones and joints.