

Examination of Gastric X-Ray Anatomy in Various Tumor Processes by Age

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Abstract: Modern morphological research aims not only to describe biological structures but also to analyze their functional relationships and regulatory mechanisms. The stomach, as a crucial organ of the digestive system, plays a significant role in human health, with up to 35% of the population experiencing gastric pathologies. This study investigates age-related features of X-ray anatomy of the stomach and develops a differential diagnostic algorithm. A total of 300 patients, categorized into control and gastrointestinal disease groups, underwent X-ray, MSCT, ultrasound, and FGDS examinations. The findings reveal that morphological and functional characteristics of the stomach vary across age groups and are influenced by constitutional factors. Adolescents commonly experience functional gastric disorders, often linked to psychoemotional factors. X-ray imaging remains a key diagnostic tool, providing insights into gastric structure, motility, and pathology. Understanding these age-related variations is essential for accurate diagnosis and treatment, emphasizing the need for further research on the interplay between somatic constitution and digestive health.

Key words: stomach morphology, X-ray anatomy, gastrointestinal diseases, age-related changes, functional pathology, radiation diagnostics, gastric motility.

Introduction.

Modern science not only seeks to identify and explain phenomena, but also tries to control biological processes using regulatory mechanisms. Therefore, the study of intercellular, tissue and organ relationships is an urgent and promising area of morphology. As many authors note, the relevance of studying the morphology of the stomach is undeniable [Vilkova, I.V., 2011]. This is due to its important role in the body and a large number of diseases of the gastrointestinal tract. Today, up to 35% of people suffer from various stomach pathologies. There was a paradoxical situation in the world when the progress of medicine and in-depth analysis of pathology were ahead of knowledge of simple human morphology. The study of the patterns of individual human development is an urgent problem of all mankind [Balko O.A., 2018]. The aim of the study is to study the age—related features of the X-ray anatomy of the stomach and develop a differential diagnostic algorithm. An educational facility. The study examined X-rays of 300 women and men from newborns to 70 years old who were treated in hospital for gastrointestinal pathologies.

The persons of the studied category are divided into 3 groups:

- group 1 – the control group;
- group 2 – men with diseases of the gastrointestinal tract;
- group 3 - women with diseases of the gastrointestinal tract.

Material and methods

The methods of the study will be X-ray and MSCT images, as well as ultrasound and FGDS results. The research methods used are anthropometric, morphometric, X-ray, as well as statistical research methods.

Each age period has its own morphological, metabolic and functional features that determine the difference in the body's response to the same environmental influences. The greatest features of the structure, metabolism and functions in healthy and even sick people are characteristic of periods of intrauterine development (embryo, fetus) and various stages of the body's extrauterine life (especially newborns, childhood, etc.). aging). Taking into account the constitutional features of the body within the framework of the morphological approach is an obligatory component of studying the state of human health in normal and in various pathologies.

This approach to the study of the human body allows not only to get a more complete understanding of the diversity

of age typology and variability of systems, but also to determine the patterns between the human somatic constitution and its other systems. especially the digestive system. Diseases of the digestive tract that occur at this age tend to turn into a chronic form. Functional pathologies of the pharynx and esophagus in adolescents include swallowing disorders, pain when swallowing, pain behind the sternum and neck, itching, nausea, diffuse esophageal spasm, reflux esophagitis, acute and chronic esophagitis are often found. These disorders are especially characteristic of people with psychoemotional lability and neurotics. Among the functional pathology of the stomach in adolescents, hypertensive gastric dyskinesia, cardiospasm, pylorospasm, functional hypersecretion of the stomach and achilia of the stomach are often distinguished.

Results and discussion

X-ray studies play an important role in obtaining images of human organs and systems. Almost all organs and systems can be examined using contrast-free X-ray and artificial contrast techniques. The shape and condition of the stomach depend on the constitution, gender, age, tone and patient. X-rays are used to see a living organism from the inside, to study its structure and functions, to recognize pathologies and diseases. Often, diseases of the digestive system are combined with diseases of other systems, for example, scleroderma, rheumatism and diseases of the hematopoiesis. Stress and dyskinetic, metabolic and immunological factors are of great importance. Optimal methods of radiation diagnostics have been developed for each organ of the digestive tract. Based on anamnestic and clinical data, an X-ray examination is planned and carried out. This endoscopic examination is also taken into account, which allows you to examine the gastric mucosa and take material for histological examination. On radiographs, the relief of the gastric mucosa is formed by folds, interstitial spaces and gastric areas.

Conclusion

Thus, ET, being one of the key regulatory peptides, plays a multifaceted role in the body, participating in a variety of physiological and pathological processes. In the context of periodontal diseases, ET acts as an active participant in the complex interaction between pathogenic microorganisms, periodontal defense mechanisms, and the immune system. In particular, in periodontal diseases, ET acts as an active participant in the complex interaction between pathogenic microorganisms, periodontal defense mechanisms, and the immune system. Periodontal pathogenic bacteria such as *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans* produce a variety of virulence factors that can damage periodontal tissue and activate the immune response. In response to bacterial invasion, cells of innate and adaptive immunity migrate to the inflammatory site and begin to produce pro-inflammatory cytokines such as IL-1, TNF- α and IL-8, as well as lytic enzymes such as matrix metalloproteinase. These molecules play an important role in protecting the body from infection, but their excessive production can lead to damage to the body's own periodontal tissues. ET, in turn, enhances the inflammatory response by stimulating the production of pro-inflammatory cytokines and chemokines that attract additional immune cells to the inflammatory site. In addition, endothelin contributes to impaired microcirculation in periodontal tissues, which leads to hypoxia and impaired tissue trophic, exacerbating the inflammatory process.

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