

How Important are Radiological Examinations in Gastroenterology?

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Radiology imaging methods started with the discovery of X-rays in 1895 as a branch of science that provides diagnosis and treatment of diseases [1].

Today, X-ray devices that obtain images using X-rays, computed tomography (CT), mammography, fluoroscopy, ultrasonography (US) working with sound waves and magnetic resonance imaging (MRI) and angiography devices, which are large magnets and work with radio waves, are widely used in the diagnosis of diseases used as. These are: Digital X-Ray, Digital Mammography, Digital Fluoroscopy, Ultrasonography and Doppler, Digital Angiography (DSA), Bone Mineral Densitometer, 16 Slice Computed Tomography, 256 Slice Computed Tomography, 3 Tesla Magnetic Resonance Imaging, 1.5 Tesla Magnetic Resonance Imaging, PACS (Image archiving and communication system), TIPS and damaged organ biopsy, as well as paracentesis, drainage application, hepatobiliary interventions.

Making the correct diagnosis and providing the right treatment in gastroenterology consists of 3 stages, as in all parts of medicine: 1. Taking a good anamnesis, evaluation of symptoms, 2. Detailed physical examination and 3. Laboratory tests and Radiological examination [2].

As in every field of medicine, the gastroenterology department has symptoms, clinical picture, radiological imaging criteria and findings of its own diseases. In gastrointestinal system diseases, an accurate diagnosis is made by evaluating the clinical findings, laboratory results and radiological examination results together. I have mentioned the types of radiological examinations above.

And our chance of correct diagnosis increases by evaluating the results of radiological examinations such as ADBG, USG, CT, MRI, MRCP, endosonography, endoscopic examinations (esophagogastroduodenoscopy, colonoscopy) and capsule endoscopy [3].

By means of radiological examinations in gastroenterology, we obtain detailed results such as organ damage, tumor localization and size, spread area if metastasis is present, mass, stone, amount and localization of ascites, arterial stenosis and stage, inflammation rate in the patient's body. According to the results we have obtained, the right treatment can be provided [5].

Cancers of the large intestine, stomach, biliary tract, liver and pancreas are among the first in the list of cancer deaths. With CT, the presence of cancer and its spread to nearby and distant organs can be detected easily. Information about the spread and stage of cancer can guide physicians in the treatment of cancer, helping them decide whether to use surgery, chemotherapy, radiofrequency ablation therapy, chemoembolization, radiotherapy, or certain combinations of these. Especially thanks to developing technologies such as virtual colonoscopy, it is used with increasing frequency for screening purposes in high-risk patients or as an alternative to disturbing procedures such as colonoscopy [4].

CT-guided interventional radiological procedures can be performed in body areas where ultrasonography is not suitable. Many procedures such as draining the abscess, taking a biopsy from the diseased tissue, and treating the tumor tissue can be easily performed with CT [5].

Standing Direct Abdominal X-ray, on the other hand, is the first test applied to diagnose bowel obstruction and perforation, according to the results of this examination, it can be ensured that the right department is consulted and surgery under emergency conditions.

Many examples like this could be cited. As in every field, in gastroenterology, it is to make the right diagnosis and apply the right treatment by doing the right laboratory tests and radiological examinations, which are important in the first place, with little harm to the patient.

To briefly summarize the review article on this subject, I would like to say that a correct diagnosis should be made based on the clinic of any disease, laboratory data and the results of radiological methods. Therefore, radiological examinations have a great place and meaning in gastroenterology.

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