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PERSPECTIVES REGARDING IMAGISTICAL INVESTIGATIONS OF COLONIC DIVERTICULA

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Given the high incidence of colorectal cancer, the use of imagistical methods of investigation allows differential diagnosis between malignant and benign pathology, which is also frequently present. From this point of view, field studies show that colonic diverticula and diverticulosis are disorders with increasing frequency, which can be either independent, or as an accompaniment of the above mentioned neoplasical pathology. In this context, the present study aims to investigate issues related to imagistical methods that are currently used in the investigation and diagnosis of colonic diverticula in order to exclude any type of malignant diseases.

Key words: colonr, colorectal cancer, visual diagnostics, colonoscopy

Diverticula of the colon and colonic diverticulosis, gathering the presence of diverticula in the large intestine, can be described by the presence of mucosal pockets, externalized through its wall [10, 13]. In this context, diverticular disease is defined by the presence of diverticula at colonic segment level with numerical variability, from one up to a few hundred diverticula according to morphofunctional conditions and also according to the factors who are incriminated in the development of this pathology [6, 8].

In this context, among the factors that contribute to the development of colonic diverticula and of diverticulosis, we can mention the severe constipation, which leads to changes in the constitution of the muscularis leading to discontinuities in the muscular layer of the colon [9, 12].

These features lead to the appearance of the finger-glove-lining by bulging outward mucosa extensions, characteristic both for a single diverticulum and also for the totality of diverticula in the diverticular disease. In this context, we recall the morphological aspect of the diverticula-wall being composed of mucosa and serosa having a reduced thickness. We also recall the normal aspect of the intestinal wall, which is made, from profound to superficial, of mucosa, submucosa, muscularis and serosa.

The presence of a diverticulum or of uncomplicated diverticulosis does not present important clinical features in comparison to the complicated diverticulosis, which is characterized by fever and anal bleedings [14]. However, the presence of diverticula in the colon, promotes the development and exacerbation of microbial flora, bacterial growth with expected complications. In this context, we emphasize that colonic diverticulosis becomes a disease with somber prognosis due to complications [2, 5].

Classified by their severity, complications of diverticula and diverticular disease include diverticulitis, diverticular abscess, diverticular peritonitis, lower GI hemorrhage, colonic lumen stenosis by wall thickening, recto-vaginal or/and colorectal fistulas [1, 3].

The investigation of the presumption of the existence of a diverticulum or colonic diverticulosis is being made by imagistical methods such as: abdominal CT and MRI [11]. In the current practice, there are some reported cases where computed tomography, as a screening method that may not always notice the presence of small uncomplicated lesions, was not always very accurate [4].

Modern imagistical methods mentioned above have replaced the classical investigation with barium irigography and abdominal ultrasound. Currently, the most modern method of investigation is considered the colonoscopy of colonic diverticula [10].

Performed with high professionalism, this imagistical method of investigation can help to establish the correct diagnosis of diverticulitis and to exclude the malignant pathology of colon cancer or colorectal cancer [5].

Once the correct diagnosis of colonic diverticula, diverticular disease could be established by gathering anamnestic information from patient history, confirmed clinical signs by objective results of imagistical investigations, it may resort to the surgical treatment with beneficial effect on the patient´s health [7].

This study covers the practical applicability of imagistical methods used in the investigation and diagnosis of colonic diverticula. Due to the fact that colonoscopy is considered the most accurate imagistical method for this purpose, this study encourages this technique. This medical

approach is considered to be useful, since colonic diverticula can often be encountered either unique or as diverticular disease or may occur in cases accompanying local malignant pathology, colon cancer or colorectal cancer respectively.

MATERIALS AND METHODS

In this study the examination method of the patients was the CT colonoscopy. The examination was performed after rectal air insufflation with pictures in supination and pronation position with subsequent performance of MPR and VRT reconstructions, followed by endoluminal navigation. The investigation was performed after a well -prepared prior training of the patients. CT Colonoscopy is considered a modern method of investigating abdominal-pelvic region, allowing the identification of lesions that confirm the diagnosis of colonic diverticula or diverticular disease, respectively.

RESULTS AND DISCUSSION

This study was made by using a group of nine patients made up of 5 females and 4 males, aged between 40 to 60 years. Due to good training and due to spastical aspect of sigma and left hemicolon associated with important cecal and supracecal distension by the investigated 9 patients multiple infracentrimetrical diverticular images at sigmoid level were revealed.

At a male patient aged 58 was also observed a polyp with diameter of 1.2 cm in the left flexure. The case of an investigated female patient aged 60 reveals at abdominal-pelvic level the presence of certain infracentrimetrical hypodense liver lesions requiring iv contrast. The case of a male patient aged 53 shows centrimetrical renal cortical cysts-bilateral. All investigated patients did not have retroperitoneal formations with pathological significance.

The colonoscopy showed neither nodular formations of the lung bases nor massive fluid accumulation such as ascites fluid at any investigated patient. This fact indicates that this group of investigated patients has no severe diverticular disease and no accompanying signs leading to complications. Among the pictures provided by CT colonoscopy we shall present some of them that we consider suggestive for the investigation of colonic diverticula (fig. 1-6).

As a current pathology, colonic diverticula and diverticular disease should be investigated and diagnosed professionally. In order to establish a correct diagnosis, diverticulosis allows us to exclude frequent malignant pathologies. We must take into consideration that colonic diverticula and diverticulitis, influenced by determinant factors and other factors that favorise the installation of this pathology may lead to the complications such as inflammations, fistula and perforation.

In our case, colonoscopical investigation, no patient revealed any signs of clinical complications or possible occurrence of neoplasic pathology of the colon or rectum. Due to the fact that colonoscopy is a precise method of investigation, it allowed us to observe other types of anatomical structures who do not lead us to possible complications of this disease.

According to the imagistical examination by colonoscopy of our studied patients, we consider that all investigated patients have an uncomplicated form of colon diverticula.

Consequence of the high incidence of colon and colorectal cancer any clinical signs or symptoms reported by patients to a specialist physician should be investigated in order to be correctly diagnosed and to exclude any signs of malignant pathology. The presented study used imagistical investigation, colonoscopy beeing considered the most appropriate method which can be used for the accuracy of the diagnostic. Carried out with professionalism, the colonoscopy has a major contribution in the correct diagnosis. In this context the study can gladly conclude that the pathology of all investigated cases did not lead to some form of colon or colorectal cancer. After the diagnosis, the surgical treatments that were used have led to the improvement in the life-quality of the patients.

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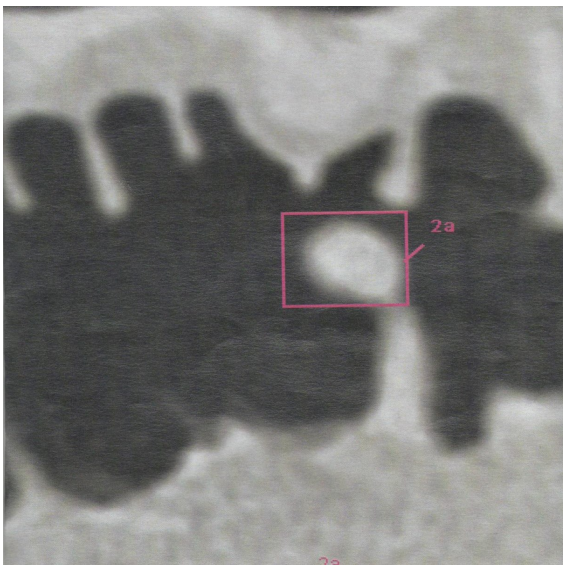

Figure 1 — Axial aquisition CT image. Colonic diverticula

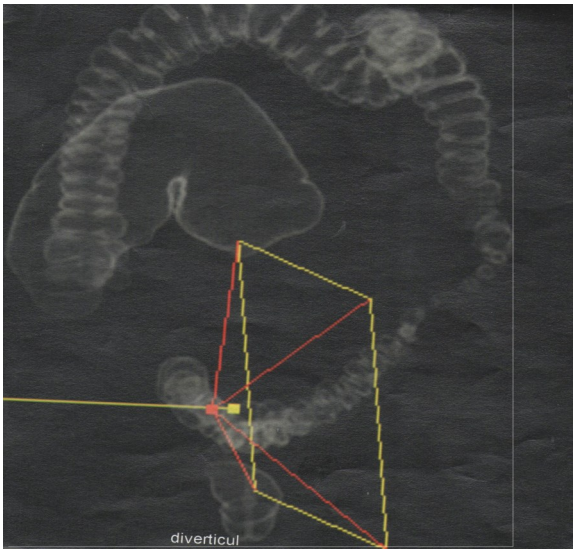

Figure 2 — Reconstruction VRT. Colonic diverticula

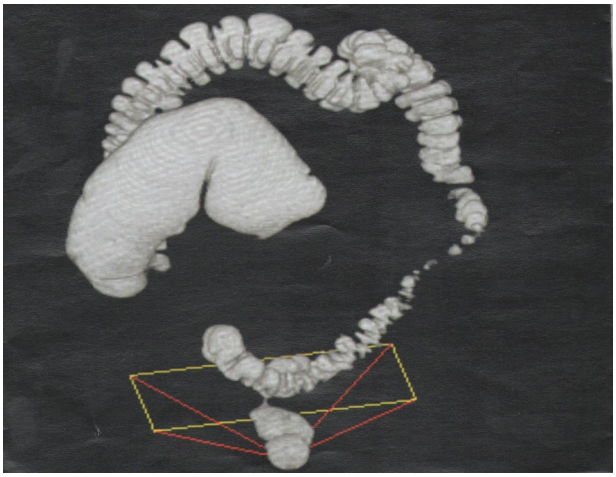

Figure 3 — Reconstruction VRT. Colonic diverticula

Figure 4 — Reconstruction VRT. Colonic diverticula

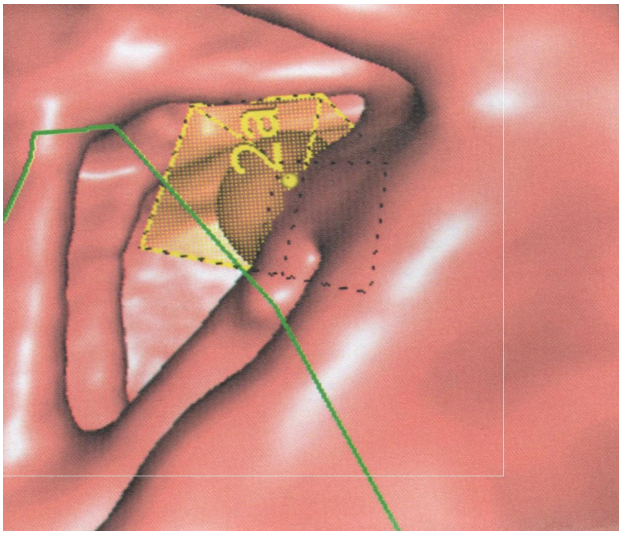

Figure 5 — Reconstruction VRT. Colonic diverticula

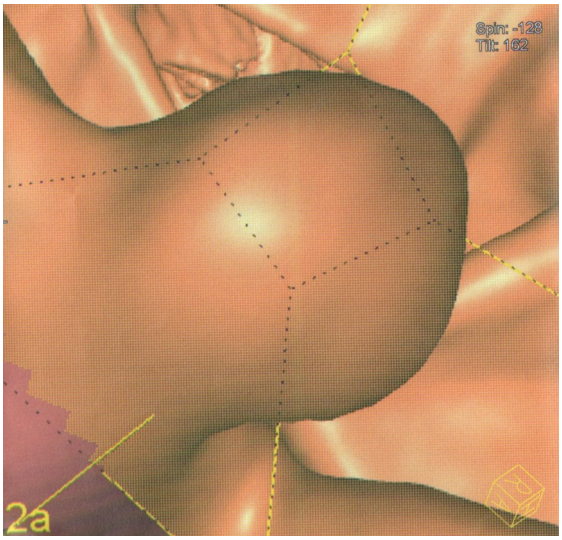

Figure 6 — Reconstruction VRT. Colonic diverticula

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ТІК ІШЕКТІҢ ДИВЕРТИКУЛДАРЫН ЗЕРТТЕУДІҢ ВИЗУАЛДЫҚ ӘДІСТЕРІНІҢ ПЕРСПЕКТИВАЛАРЫ

Тоқ ішек пен тік ішек ісігі аурулары жиі орын алуына байланысты маманға жүгінген науқас хабарлаған кез келген клиникалық белгілер немесе симптомдар ісік патологиясының кез келген көрінісіне жол бермеу және дұрыс диагноз қою үшін назарға алынуы керек. Ұсынылған зерттеуде диагностиканың визуалдық әдістері қолданылды, оны қолдану кезінде колоноскопия барынша қолайлы және дәл әдіс болып саналады. Кәсіби тұрғыда орындалған колоноскопия диагнозды дұрыс қоюда үлкен роль атқарады. Осыған байланысты жүргізілген зерттеулердің нәтижесінде барлық зерттелген жағдайларда патологиялық процесс колоректалды ракқа немесе әртүрлі формадағы тоқ ішек ісігіне әкелмегені туралы қорытынды жасауға болады. Диагноз дұрыс қойылған соң емдеудің хирургиялық тәсілдерін қолдану пациенттердің өмір сапасын жақсартуға әкелді.

Кілт сөздер: тік ішек, колоректалды рак, визуалды диагностика, колоноскопия

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ПЕРСПЕКТИВЫ ВИЗУАЛЬНЫХ МЕТОДОВ ИССЛЕДОВАНИЯ ДИВЕРТИКУЛОВ ТОЛСТОЙ КИШКИ

Вследствие высокой заболеваемости толстой кишки и рака прямой кишки любые клинические признаки или симптомы, о которых сообщает больной при обращении к специалисту, должны быть приняты во внимание и исследованы для постановки правильного диагноза и исключения любых признаков злокачественной патологии. В представленном исследовании использовались визуальные методы диагностики, при использовании которых колоноскопия считается наиболее подходящим и точным методом. Профессионально выполненная колоноскопия играет большую роль в постановке правильного диагноза. В связи с этим в результате проведенного исследования можно сделать вывод о том, что патологический процесс во всех исследованных случаях не привел к колоректальному раку или раку толстой кишки в той или иной форме. После установления правильного диагноза использование хирургических методов лечения привело к улучшению качества жизни пациентов.

Ключевые слова: толстая кишка, колоректальный рак, визуальная диагностика, колоноскопия