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ACUTE APPENDICITIS IN ELDERLY AND SENILE PATIENTS: MODERN APPROACHES TO DIAGNOSIS AND TREATMENT

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Relevance of the study. Acute appendicitis (AA) is the most common acute abdominal disease, with an incidence of 4-5 cases per 1,000 people. Postoperative complications after appendectomy range from 5% to 9%, and the mortality rate for this condition is 0.1-0.3%.

The increasing proportion of elderly and senile individuals in the general population has led to interest in the specific clinical patterns of this age group, and the development of a geriatric surgical specialty. Acute appendicitis remains one of the most common acute conditions, ranking first among emergency abdominal surgeries. Extensive literature has been devoted to this topic, treatment principles have been thoroughly developed and firmly established, and surgical tactics are unquestionable. However, the course of acute appendicitis in elderly and senile patients attracts particular attention from surgeons due to diagnostic difficulties associated with multimorbidity and the body's limited adaptive capacity.

A large number of complications and high mortality in elderly and senile patients, on the one hand, are associated with the low adaptive capacity of life-support organs to endotoxemia , secondary immunodeficiency and concomitant polymorbidity , on the other hand, with untimely diagnosis or hyperdiagnosis due to the erasure of general and local manifestations of OA, cognitive disorders and discrepancies in laboratory parameters of the severity of the pathological process.

Clinical diagnosis of OA in elderly and senile patients is challenging due to the fact that more than 40% of patients present with an atypical clinical presentation. Dissatisfaction with the results of traditional OA diagnostic and treatment approaches prompts clinicians to search for effective treatment methods using modern technologies.

All this indicates that the problem of diagnosing and treating OA is far from resolved. Therefore, all new research in this area is relevant and has great practical significance.

Purpose of the study.

Improving the results of diagnosis and treatment of acute appendicitis in elderly and senile patients.

Material and methods of research.

The work is based on the results of a retrospective and prospective analysis of the diagnosis and treatment of OA in 64 elderly and senile patients who underwent surgery at the City Clinical Hospital No. 7 in Tashkent.

The study involved elderly (61-74 years) and senile (75-89 years) patients according to the classification adopted at the international symposium on age classification (1965).

The clinical diagnosis of appendicitis was typically based on a detailed patient history and physical examination. In some cases, the Alvarado score was used to facilitate the interpretation of clinical and laboratory data.

In elderly and senile patients, the disease was characterized by a predominance of destructive forms, due to decreased reactivity and atherosclerotic vascular lesions, which directly cause rapid disruption of blood supply with the development of necrosis and gangrene of the appendix. The symptom complex of acute appendicitis in this group of patients often had an

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insidious pattern. Due to a physiologically elevated pain threshold, patients often failed to notice the epigastric phase of abdominal pain at the onset of the disease. Nausea and vomiting were more common, and constipation was not a significant factor, as bowel movements tend to be delayed in old age.

Abdominal examination revealed only moderate tenderness in the right iliac region, even in destructive forms of appendicitis , as a result of age-related relaxation of the abdominal wall muscles . Because of this, muscle tension in the lesion was insignificant, but Shchetkin-Blumberg's sign was pronounced. Voskresensky's and Sitkovsky's signs were often positive. Body temperature, even in destructive appendicitis, increased moderately or remained normal. The white blood cell count was normal or slightly elevated—in the range of 10-12 x 10^9/L; the neutrophilic shift in the blood count was not significant. General clinical examinations were performed routinely on each patient. These included a complete blood count, biochemical blood test, coagulation profile, and urinalysis.

Sonoscape equipment S 22» using convex and linear sensors of 3.5 and 5 MHz (Grinberg A. A. et al ., 1998). The main goal of the study during the patient's hospitalization was to confirm or exclude (differential diagnosis) OA, and during treatment – to determine the dynamics of the infiltrate size and timely detection of abscess formation .

Open appendectomy was performed under general anesthesia using the MacBurney-Volkovich-Dyakonov oblique variable approach . The surgical stages followed the generally accepted technique (Savel'ev V.S. et al ., 2013). Postoperatively, all patients received antibacterial therapy. Laparoscopic appendectomy was performed using a mobile stand from the Karl company . Storz » (Germany) with a video system kit: a laparoscope with angled (30 ˚ - 450 ˚) optics , a light guide, a video camera, a video monitor with a 21- inch screen , a xenon illuminator, a carbon dioxide insufflator , an electrosurgical unit, and an irrigator-aspirator (Sukhopara Yu.N. et al ., 2003; Fedorov I.V. et al ., 2004).

Results of the study. According to clinical and laboratory signs, destructive appendicitis was detected in 56 out of 64 elderly and old patients. Upon subsequent differentiation, uncomplicated forms of destructive appendicitis were suspected in 37 patients, complicated ones - in 19 (dense appendicular infiltrate (AI) - 5, local peritonitis - 7, periappendiceal abscess (PAA) - 3, loose AI - 2, widespread peritonitis - 2). In 8 observations, due to the minimal duration of the anamnesis and heterogeneous symptoms, there was no convincing possibility to exclude or verify appendicitis, which confirmed the advisability of identifying a group of patients with a questionable clinical picture. Routine ultrasound examinations in the above-mentioned groups were informative in 26 cases, with direct and indirect echosonographic signs of appendicitis visualized. The distribution was as follows: of 19 patients with presumed uncomplicated destructive appendicitis, the clinical diagnosis was confirmed in 14.

The explanation for the correction of the initial diagnosis is the similarity of the clinical manifestations of loose infiltrate and uncomplicated forms, as well as the ability of echosonography to detect periappendicular hypoechoic infiltration. Therefore, verification of loose-maturity AI is based on ultrasound examination data.

Full compliance of radiological data with clinical findings was observed in 9 patients with complicated forms of OA, demonstrating both the validity of the proposed clinical and laboratory criteria and the high diagnostic properties of ultrasound in recognizing complications. In particular, echosonography was the final examination method in all patients with dense appendicitis and formed periappendiceal abscess, eliminating the need for exploratory operations. In 2 patients with generalized peritonitis, dilated loops of the small intestine were visualized, which served as an indication for laparotomy. In a group of patients with a questionable clinical

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picture, consisting of 8 patients, ultrasound allowed the diagnosis of destructive uncomplicated appendicitis in 5 cases. In 3 patients, other pathologies (mesadenitis , gynecological diseases) were verified. and necrosis of the sigmoid colon fat pad), which made it possible to avoid unnecessary appendectomies and adjust subsequent treatment tactics. Endovideosurgical technique was the preferred method for completing the treatment and diagnostic program in patients with destructive appendicitis, with the exception of patients with dense appendicitis (conservative therapy was prescribed), periappendicular abscess (diapeutic method was used), widespread peritonitis with small bowel paresis (laparotomy was performed), as well as in cases with general contraindications to the application of carboxyperitoneum and in cases of adhesions formed after previous abdominal surgeries.

The use of laparoscopy in patients with an equivocal clinical picture and uninformative ultrasound examination facilitated diagnosis in all cases and determined indications for laparoscopic appendectomy. In 3 patients, evidence of destructive appendicitis was absent, negating appendectomy as other conditions (gynecological pathology, mesadenitis , and necrosis of the sigmoid colon fat pad) were verified. A review of pathological examinations of the removed appendices revealed consistent preoperative and postoperative diagnosis in all cases. In a retrospective analysis, open appendectomy was the primary surgical method, performed in 48.8%. Laparoscopic techniques were used in 45.9% of cases, diapetic therapy in 1.7%, and conservative therapy in 3.6%. Despite the increase in the incidence of LAE (from 25.8% to 84.2%) and the shift in its favor compared to open endovascular procedures in recent years, the potential of the endovideosurgical method remains. An assessment of immediate treatment outcomes noted that intraoperative complications were observed in 3.6% of cases and were roughly comparable for endovideosurgical and open methods – 3.4% and 3.9%. Postoperative complications according to the Clavien classification Dindo complications developed in 7.1% of cases. Laparoscopic appendectomies were associated with an unfavorable postoperative course in 1.9% of patients, while open appendectomies were associated with an unfavorable postoperative course in 12.4% of cases. Laparoscopic appendectomies were most effective in cases of complicated AA (2.2%). Open appendectomies, on the other hand, were significantly more frequently associated with postoperative complications (44.2%). This finding is explained by the contact of the anterior abdominal wall tissues with the abdominal cavity and peritoneal cavity, which are contaminated with pathogenic microflora, as well as increased surgical trauma.

Effective results of LAE were achieved by adhering to the surgical technique: hemostasis control, hermetic closure of the abdominal cavity stump, specimen extraction in a container, thorough debridement of the right iliac fossa and pelvis with subsequent aspiration of lavage fluid, and optimal antibacterial therapy. Conservative therapy was ineffective in one patient, necessitating the use of a diapetic method. There were no complications with percutaneous drainage of the pelvic artery under ultrasound navigation. The average length of hospital stay was 8.3 days. Patients who underwent LAE stayed in the hospital for an average of 6.6 days and were discharged 2.5 days earlier than those who underwent OAE. The reason for the rapid recovery after laparoscopic procedures was the reduced surgical trauma , which is especially important in geriatric and elderly patients.

Conclusions. Thus, an analysis of diagnostic results for elderly and elderly patients with OA suggests that the integrated use of modern radiological and minimally invasive imaging techniques facilitates the intensification and accuracy of preoperative diagnostics, enabling the development of a rational treatment program. Continuity of diagnostic stages with the synthesis of clinical, laboratory, and instrumental criteria for destructive and complicated appendicitis

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enabled timely verification of the disease, determination of its type, and the development of a rational treatment strategy in all cases.

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