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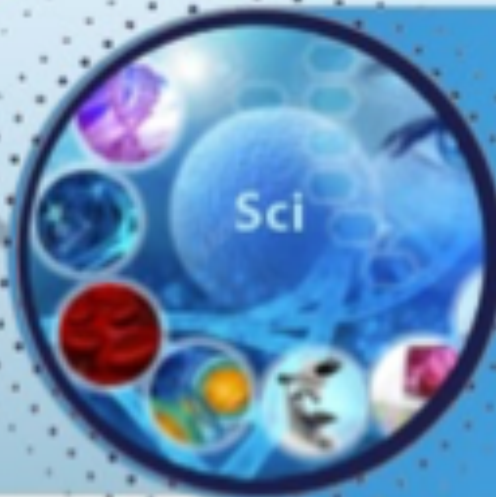

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Features of Clinical Manifestation of Acute Intestinal Obstruction in Elderly and Senile Patients

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ABSTRACT

One of the most severe in its unpredictability urgent pathology of the abdominal cavity organs, in fairness, is considered to be acute intestinal obstruction. This is due to the persistence of the difficulties of diagnosis and therapeutic measures in acute intestinal obstruction in elderly and senile patients. A clinical analysis of the features of acute intestinal obstruction manifestation in 53 elderly and senile patients was carried out. The results obtained indicate that in elderly and senile patients, the features of acute intestinal obstruction are prevalent in tumour genesis with erasure of the clinical picture and well-known symptoms of the disease. The reason for this is the severity of the morbid background against the background of a large number of concomitant diseases.

Keywords: *acute intestinal obstruction, elderly age, senile age*

INTRODUCTION

Among the most common pathologies in urgent abdominal surgery, acute intestinal obstruction is still leading in elderly and senile patients [1-4].

As early as 1954, O.H. Kment presented detailed information on the features of this nosological form of acute surgical pathology [5]. Based on the analysis of a sufficient amount of clinical material, he proposed a therapeutic and diagnostic complex algorithm, which made it possible to identify risk factors for the development of postoperative complications of acute intestinal obstruction in elderly and senile patients.

In elderly and senile patients, according to N.J. Menon et al. [6], J. Waisberg et al. [7], D.Y. Cheung et al. [8], the complexity of pathophysiological changes in the body, leading to severe forms of acute intestinal obstruction in the postoperative period, which in turn contribute to a high incidence of fatal outcomes, is recognised. According to V.N. Bernakinas [9], the presence of a large number of concomitant diseases also plays an important role in this.

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Our analysis of statistical data on the mortality rate in the general structure of emergency diseases for the period from 2000 to 2020 showed a variation value for acute intestinal obstruction among elderly and senile patients ranging from 14.8% to 19.2% [10-13].

Acute intestinal obstruction in elderly and senile patients is characterised by the obliteration of the signs of clinical manifestation of the disease. Often, difficulties arise even in determining the anamnestic onset of the disease, which is due to the chronic course of transient intestinal dysfunctions, dementia of elderly patients, and a high incidence of other concomitant diseases [14].

Also, for elderly and senile patients, the so-called false intestinal insufficiency may be characteristic. This disease is almost not found among young patients. A group of clinicians led by J.L. Perez-Lara et al. In 2019, a description of such a pathological condition was presented, which is characterised by functional expansion of the colon, proceeding without signs of intoxication [15]. Given that intestinal obstruction is not mechanical, patients experience bloating, anxiety, nausea and vomiting. However, the duration of this pathological process can be fatal. A high level of suspicion is of paramount importance for early diagnosis and surgical intervention.

The development of substantiated criteria for differentiated diagnosis and early prediction of the outcome of the disease can be considered one of the priority areas for research. In this direction, an important role is played by multicenter studies, which make it possible to develop specific practical recommendations and optimal standards for the provision of medical and diagnostic care. The importance of such research has been repeatedly expressed and reflected in the resolutions of major international congresses and conferences [16, 17].

MATERIAL AND METHODS

The results of a comprehensive examination of 53 patients with acute intestinal obstruction, in the elderly and senile, who were treated and examined in the clinic of the Khorezm branch of the Republican Scientific and Practical Center for Emergency Medical Care of the Ministry of Health of the Republic of Uzbekistan for the period from 2021 to 2023, were analysed.

The distribution of patients by sex from their total number revealed a slight predominance of male patients (1.8%).

At the same time, if female patients prevailed among elderly patients (by 7.6%), then among elderly patients - male (1.8 times), and this difference was largely.

More than 70% of patients came to our clinic and were hospitalised up to 48 hours after the onset of the disease. The main chronological range of patients' visits to our clinic fell on the period from 24 to 48 hours after the onset of the first signs of the disease. Patients in intervals of more than 48 hours and between 12-24 hours were almost in the same proportion.

The distribution of patients, depending on the type of affected intestine, showed the predominance of the large intestine as a source of acute intestinal obstruction. Moreover, this trend was noted by us both among elderly and senile patients. At the same time, if among elderly patients, the predominant lesion of the large intestine was only 2.5%, then among elderly patients, it was 28.6%. Combined lesions of the small and large intestines were noted only among elderly patients.

A feature of the onset of acute intestinal obstruction in elderly and senile patients is the low frequency of patients up to 12 hours after the onset of the disease. Such a chronology of patients' visits to the clinic was more typical for elderly patients, in which 71.8% of patients came to the clinic within 24 hours or more from the onset of the disease. However, among elderly patients, the prevailing time (71.4%) was 12-48 hours from the onset of the first signs of the disease. Moreover, the minimum value in this age category was distinguished by patients who came later than 48 hours from the onset of the disease.

The distribution of patients depending on the part of the affected intestine showed a predominant lesion of the iliac portion of the small intestine (34.5%). Its prevalence was mainly due to elderly patients (41.5%), which was 2.9 times higher than in elderly patients (14.3%). Fewer than cases of lesions of the iliac part of the small intestine, we diagnosed sources of acute intestinal obstruction located in the transverse colon (25.5%) and in the descending part of the large intestine (20%). In almost the same proportion, the sources of acute intestinal obstruction were the sigmoid part of the large intestine (9.1%) and the jejunum of the small intestine (7.3%). The cecum and rectum were in the same proportion in terms of the frequency of the source of acute intestinal obstruction (1.8% each, respectively) – Figure 1.

In proportion to the type of intestine, in 84% of cases, the source of acute intestinal obstruction was the iliac part of the small intestine, and in 16% - the jejunum part of the small intestine. At the same time, the iliac part of the small intestine was affected more in elderly patients than in elderly patients (by 5%), and the jejunum of the small intestine was more affected in elderly patients than in elderly patients (also by 5%).

Lesions of the large intestine were characterised by a predominance of localisation of the pathological process in the transverse colon region (43.8%). At the same time, in elderly patients, such localisation determined more than half of the frequency of lesions of the large intestine (52.4%). In elderly patients, such a lesion was noted only in 27.3% of cases.

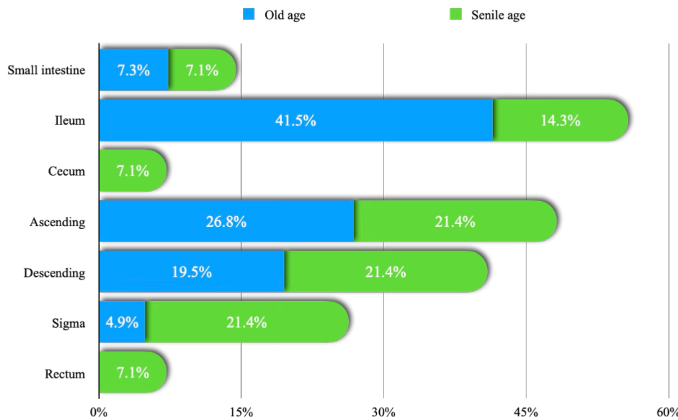

Figure 1. Distribution of patients depending on the part of the affected intestine

In 34.4% of patients, the source of acute intestinal obstruction was the descending part of the large intestine. At the same time, it was higher among elderly patients (38.1%) than among elderly patients (27.3%).

Lesions of the sigmoid portion of the large intestine were affected three times more often in elderly patients than in elderly patients. A similar thing can be noted in the lesions of the cecum and rectum, which prevailed among elderly patients.

Thus, the analysis of the localisation of the source of acute intestinal obstruction in elderly and senile patients made it possible to state the predominance of lesions of the large intestine over the thin intestine. At the same time, among the parts of the small intestine, the prevailing lesion was noted about the ileum and among the sections of the large intestine – the transverse colon.

The distribution of patients depending on the type of acute intestinal obstruction revealed the predominance of the obturation form. Moreover, among elderly patients, it accounted for most of the varieties of acute intestinal obstruction.

Among the examined patients, almost half (43.4%) were cases with obturation intestinal obstruction. Further, in terms of volume, 20 (37.7%) patients were diagnosed with acute strangulated intestinal obstruction, and only 10 (18.9%) patients were diagnosed with combined forms of intestinal lesions.

In elderly patients, patients with strangulation acute intestinal obstruction (19 patients; 48.7%) and acute obturation intestinal obstruction (11 patients; 28.2%) prevailed. Only 9 (23.1%) patients were diagnosed with combined forms of acute intestinal obstruction. Among elderly patients, 85.7% of cases (12 patients) were with obturation acute intestinal obstruction, and only 1 case (7.1% each) of elderly patients had strangulation and combined forms of acute intestinal obstruction.

In elderly and senile patients, the main causes of acute intestinal obstruction were intestinal tumour (35.8%) and strangulated hernia (32.1%). At the same time, in elderly patients, cases with strangulation of abdominal hernias prevailed (17 patients; 43.6%), then among elderly patients – intestinal tumours (12 patients; 85.7%). We have not noted any cases of acute intestinal obstruction as a result of hernia strangulation among elderly patients.

Acute adhesive intestinal obstruction and obturation of the intestine with bile stones were the causes of the disease only in 2 (5.1%) elderly patients.

The remaining causal part of the development of acute intestinal obstruction consisted of such pathological processes as volvulus (3 patients; 5.7%) and intussusception (2 patients; 3.8%). The latter, however, was represented by a combined type of acute intestinal obstruction.

A feature of gerontological patients is the presence of a severe morbid background due to the severity of concomitant diseases. In most cases, they are combined, aggravating the general condition of the patient.

The analysis showed that 297 types of concomitant diseases were diagnosed in patients with acute intestinal obstruction. On average, each patient with acute intestinal obstruction had 5.6 concomitant diseases.

The distribution of concomitant diseases by body systems showed the prevalence of pathologies with damage to the cardiovascular system, which in frequency exceeded among elderly patients and accounted for 2.4 names per 1 patient, while in elderly patients, this indicator was equal to 2.3 units.

The main diseases of the cardiovascular system were coronary heart disease (18.8% in elderly patients and 15.7% in elderly patients), hypertension (10.1% in elderly patients and 5.6% in elderly patients), obliterating atherosclerosis of the arteries of the lower extremities (5.3% in elderly patients and 9.0% in elderly patients) and varicose veins of the lower extremities (8.2% in elderly patients and 7.9% in elderly patients).

The incidence of concomitant diseases from the gastrointestinal tract was 0.7 units per 1 elderly patient and

1.3 units per 1 senile patient. The main diseases of the digestive system were gastric and duodenal ulcers (4.3% in elderly patients and 3.4% in elderly patients), chronic diseases of the large intestine characterised by constipation (5.8% in elderly patients and 13.5% in elderly patients) and chronic liver diseases (3.8% in elderly patients and 3.4% in elderly patients).

All of them were characterised by chronic neurological disorders, to a greater extent, they were due to the presence of atherosclerotic lesions of the cerebral vessels, ischemic encephalopathy, the consequences of acute cerebral circulation disorders, parkinsonism, and cognitive disorders of various degrees.

Diseases of the genitourinary system were also found in elderly patients (0.8 units per 1 patient) than in elderly patients (0.5 units per 1 patient). The main diseases of the genitourinary system were chronic pyelonephritis (2.4% in elderly patients and 3.4% in elderly patients) and benign prostatic hyperplasia (7.7% in elderly patients and 9.0% in elderly patients).

The musculoskeletal system was subjected to the pathological process in almost the same proportion among patients of both elderly (0.5 units per 1 patient) and senile (0.6 units per 1 patient). The main diseases of the musculoskeletal system were chronic arthritis (5.8% in elderly patients and 6.7% in elderly patients) and gout (3.8% in elderly patients and 2.2% in elderly patients).

Respiratory pathologies accounted for 0.3 units per 1 elderly patient and 0.4 units per 1 elderly patient. All of them were represented by chronic obstructive pulmonary diseases (5.8% in elderly patients and 5.6% in elderly patients).

Concomitant diseases of the endocrine system were represented by type 2 diabetes mellitus, which accounted for 0.4 units per 1 elderly patient (8.2%) and 0.1 units per 1 elderly patient (1.1%).

RESULTS AND DISCUSSION

Clinical manifestations of acute intestinal obstruction in elderly and senile patients had a peculiar picture, which had both similarities and distinctive aspects.

In patients with acute intestinal obstruction (40.4%), abdominal pain of a cramping nature was characteristic. A feature of such pains was a periodic decrease in the intensity of pain, which was characterised by a longer (on average 10.7±3.1 minutes) duration of the pause. After the start of antispasmodic therapy, the interval between cramping abdominal pains lengthened and sometimes completely disappeared.

In patients with strangulated intestinal obstruction (46.2%), the pain syndrome was characterised by a higher intensity. At the same time, in contrast to the pain of obturative intestinal obstruction, the strangulation interval between attacks did not bring complete satisfaction. However, we did not note such a nature of pain, and especially interictal periods, in patients with a combined type of acute intestinal obstruction (13.5%).

During a pain attack in the abdomen, patients had the pallor of the skin, which was covered with cold, sticky sweat. In the intervals of pain syndrome, patients increased nausea and vomiting. In patients with strangulated intestinal obstruction, it did not bring relief, and nausea continued to remain stable.

Only in 7.3% of patients, we noted the presence of vomiting of intestinal contents. In other cases, such a sign was not noted by us during 1-3 days of the disease.

The next characteristic clinical sign of acute intestinal obstruction in elderly and senile patients was delays in the passage of gas and stool. In 46.2% of elderly patients and 35.7% of elderly patients, this sign of the disease did not have a stable manifestation. In other cases, patients had diarrhoea with positive symptoms at Grekov and Obukhov hospitals. Bowel emptying after conservative measures did not bring relief to patients, and there was no feeling of complete bowel emptying. At the same time, in 4.9% of elderly patients and 28.5% of senile patients, the passage of gas and faeces was stopped immediately as acute intestinal obstruction developed.

In the early stages of the disease, 42.1% of elderly patients and 85.7% of elderly patients showed increased peristalsis in the later stages of the development of acute intestinal obstruction.

Later, in patients with acute intestinal obstruction, the pain syndrome became permanent. The intensity of abdominal pain decreased. Signs of dehydration of the body appeared, which was most pronounced in patients with a severe morbid background.

To compare the manifestations of clinical signs of acute intestinal obstruction in elderly and senile patients, we conducted a similar analysis of the chronology of the development of the phases of this disease according to the clinical guidelines of the Russian Society of Surgeons [18].

According to the clinical guidelines, there are 3 phases of the clinical manifestation of acute intestinal obstruction: the first phase of "ileus cry", which lasts from 2 to 12 hours from the onset of the disease, the second phase of "intoxication",, 12-36 hours, and the third phase of "peritonitis" - more than 36 hours.

As our studies have shown, the average level of chronology of clinical manifestations of acute intestinal obstruction generally corresponds to the data of clinical guidelines (Table 1). However, when analysing the indicators of the confidence interval, we found pronounced discrepancies, which we took as the features of the clinical course in elderly and senile patients.

Table 1

Comparative nature of the chronology of phases of development of acute intestinal obstruction in elderly and senile patients

NAME OF THE PHASE OF ACUTE INTESTINAL OBSTRUCTION	AGE SUBGROUPS				TOTAL	
	Elderly		Senile			
	M	m	M	m	M	m
Ileus cry phase	16,13	4,21	16,53	4,52	16,13	4,15
Intoxication phase	16,33	5,43	17,41	6,21	16,43	5,40
Peritonitis phase	30,21	7,3	26,15	7,22	28,42	7,22

Clinical signs characteristic of the first phase of acute intestinal obstruction appeared for an average of 16.13±4.15 hours [CI: 12.4; 20.28]. This nature of the expression of the confidence interval indicates a significant prolongation of the development of the first phase of acute intestinal obstruction. At the same time, this period was longer in elderly patients [CI: 12.01; 21.05] than in elderly patients [CI: 12.36; 19.5].

In contrast to the chronology of the first phase of the development of acute intestinal obstruction, the second phase in elderly and senile patients occurred earlier [CI: 11.03; 22.23], although the average level corresponded to the data of clinical standards. Early onset of the second phase of clinical manifestations of acute intestinal obstruction was more pronounced among elderly patients [CI: 11.3; 21.3] than among elderly patients [CI: 11.2; 23.2].

The third phase of the development of acute intestinal obstruction in elderly and senile patients provided that it developed within more than 36 hours, did not reach this level on average in our studies [CI: 21,16; 35,2]. Achievement of the recommended level of chronology of the third phase of the development of acute intestinal obstruction was noted among several elderly patients [CI: 22,55; 37,1]. However, among elderly patients, we did not note such a duration of the onset of the third phase of the clinical manifestation of acute intestinal obstruction in any patient [CI: 19,41; 33,33].

CONCLUSION

The features of the development and clinical manifestations of acute intestinal obstruction in elderly and senile patients are the prevalence of the obturation type of lesions of predominantly tumour origin, the erasure of pathognomonic symptoms with the prolongation of the first phase of the disease (by 8.28±1.3 hours) and the earlier onset of clinical signs characteristic of the second (at 19.57±3.9 hours) and the third (at 8.2±2.3 hours) phases of the pathological process. The severity of the manifestation of clinical signs of acute intestinal obstruction is due to the pronounced morbid background, which includes an average of 5.3 units and 5.6 units of nosological names in elderly and senile patients, respectively.

Conflict of Interest – None

Ethical aspect – the article is reviewed, and the information presented has a cited reference to primary sources.

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KEKSA VA QARI YOSHDAGI BEMORLARDA O'TKIR ICHAK TUTILISHINING KLINIK KECHISH XUSUSIYATLARI

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ANNOTATSIYA

Qorin bo'shlig'i organlarining kutilmaganligida eng og'ir patologiyasi, adolatli bo'lsa, o'tkir ichak obstruksiyasi hisoblanadi. Bu keksa va qari bemorlarda o'tkir ichak obstruksiyasida diagnostika va davolash qiyinchiliklarining doimiy davom etishi bilan bog'liq. 53 ta keksa va qari bemorlarda o'tkir ichak tutilishi namoyon bo'lish xususiyatlarining klinik tahlilini utkazish mazkur ishning maqsadi buldi. Olingan natijalar shuni ko'rsatadiki, keksa va qari bemorlarda o'tkir ichak tutilishi xususiyatlari o'simta genezi keng tarqalgan, bunda kasallikning klinik manzarasi va taniqli alomatlari yo'qoladi. Buning sababi ko'plab kasalliklar fonida morbidlikning og'irligidir.

Kalit so'zlar: o'tkir ichak tutilishi, keksalik yoshi, qarilik yoshi

ОСОБЕННОСТИ КЛИНИЧЕСКОГО ПРОЯВЛЕНИЯ ОСТРОЙ КИШЕЧНОЙ НЕПРОХОДИМОСТИ У БОЛЬНЫХ ПОЖИЛОГО И СТАРЧЕСКОГО ВОЗРАСТА

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АННОТАЦИЯ

Одной из тяжелых по своей непредсказуемости ургентной патологии органов брюшной полости, по справедливости, считается острая кишечная непроходимость. Это обусловленного стойким сохранением сложностей диагностики и лечебных мероприятий при острой кишечной непроходимости у больных пожилого и старческого возраста. Проведен клинический анализ особенностей проявления острой кишечной непроходимости у 53 больных пожилого и старческого возраста. Полученные результаты свидетельствуют, что у больных пожилого и старческого возраста особенностями острой кишечной непроходимости превалирующими являются опухолевого генеза со стертостью клинической картины и общеизвестных симптомов заболевания. Причиной этого является выраженность морбидного фона на фоне большого количества сопутствующих заболеваний.

Ключевые слова: острая кишечная непроходимость, пожилой возраст, старческий возраст