

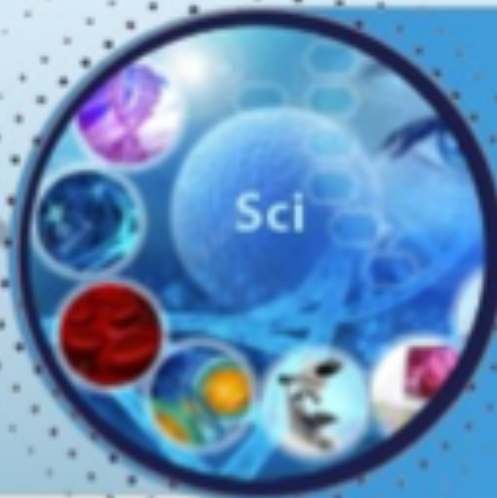


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Acute intestinal obstruction in elderly and senile patients

S.S. Khudoyberdiev

ABSTRACT

One of the first ancient scholars to describe in detail all aspects of acute intestinal obstruction is Abu Ali Ibn Sino (980-1030), known in Europe as Avicenna. His description of acute intestinal obstruction in the multi-volume treatise "Canon of Medicine" (Book 3, Part 16, Treatise 3) presented the name of this pathology as "qoolinj" and "ehtebase soft" (stool retention). "Qoolinj" and "ilavos" are intestinal diseases characterized by a pain syndrome that leads to difficulty in defecation. The causes of "qoolinj" are in and around the large intestine, while the origin of "ilavos" is in the small intestine. Based on the symptoms and their causes, "qoolinj" and "ilavos" are included in different types, and the obstructive type can be considered the equivalent of bowel obstruction in modern medicine. Avicenna said that the cause of "qoolinj" and "ilavos" may be an obstruction that blocks the passage of feces and gas. Thus, it leads to severe distension of the intestines and abdominal pain.

Truly described in reality corresponds to many aspects of the etiology, pathogenesis and clinical manifestation of acute intestinal obstruction, the current problems of which we describe in this review article.

Keywords: acute intestinal obstruction, elderly and senile age, mechanism

Statistical information. Acute intestinal obstruction is considered to be one of the most difficult in its unpredictability of urgent pathology of the abdominal organs. This is due to the persistent persistence of difficulties in diagnosis and treatment of acute intestinal obstruction in elderly and senile patients.

A number of statistical data on the prevalence, effectiveness of diagnostic measures, the course of the disease and its outcome can also be cited as evidence [1]. For example, according to publications over the past 10 years, we have learned that acute intestinal obstruction occurs from 5 to 8 cases per 100,000 people. At the same time, diagnostic errors among elderly and senile patients with acute intestinal obstruction can reach from 20.5 to

68.4%. Such a wide range of diagnostic errors is due to the presence of problems at different stages and terms of providing medical and diagnostic care to patients.

At the prehospital stage, errors in the diagnosis of acute intestinal obstruction in elderly and senile patients are noted in 33.2-55.4%. At the same time, in a surgical hospital, the frequency of diagnostic errors of acute intestinal obstruction in elderly and senile patients decreases from 18.5% to 20.3% of cases [2].

Another feature of acute intestinal obstruction in elderly and senile patients is the late referral of patients to the clinic. According to statistical data, the majority of patients come to the clinic late, more than 24 hours after the onset of the disease, which according to some au-

thors can reach up to 40% of elderly and senile patients [3].

Late referral of patients with acute intestinal obstruction in the elderly and senile age for qualified medical care, difficulties in making a timely correct diagnosis and making a decision on the need for surgical intervention are the main predictors of an increase in the incidence of death [4].

The data on mortality in acute intestinal obstruction among elderly and senile patients are contradictory. A fatality rate of 9% to 13% is reported. At the same time, data on the mortality rate of up to 70% are also provided [5].

Randomization of chronological literature data on lethal outcomes showed that during 2004-2013, the mortality rate for acute intestinal obstruction among elderly and senile patients was 60%, and during 2014-2023 this indicator decreased significantly, not exceeding 42%. Nevertheless, in absolute numerical terms, the mortality rate from this pathology in elderly and senile patients is in the leading position among the diseases of emergency abdominal surgery [6].

According to the literature, the ratio of the distribution of patients with acute intestinal obstruction by sex does not have an absolute significance in the trend. A number of literature sources provide information that male patients prevail over female patients. However, a number of types of intestinal obstruction, such as acute obturation by gallstones, are predominantly female. Nevertheless, the average value of the correlation between male and female patients fluctuates within 10% [7].

Another feature of the course of acute intestinal obstruction in elderly and senile patients is the presence of a number of concomitant pathologies, which, unfortunately, are often decompensated. Taking this factor into account, making a decision on timely compensation for impaired functions of other organs and systems can increase the effectiveness of treatment. Thus, conservative measures are effective in only 14% of patients, and the share of palliative and symptomatic surgeries reaches 50% [8].

The proportion of complications of acute intestinal obstruction in elderly and senile patients also remains high, which reaches up to 48%. These data are given regarding acute intestinal obstruction in elderly and senile patients, which are not of tumor etiology [9].

According to the literature, the mortality rate in elderly and senile patients in case of progression of acute intestinal obstruction reaches 28.9%, and in the develop-

ment of severe intoxication, sepsis and multiple organ failure - 72%. It is endogenous intoxication and severe disturbances of the water-electrolyte balance that are the main cause of lethal outcomes of acute intestinal obstruction in elderly and senile patients. There is evidence of a high mortality rate, reaching 55.4% with the development of purulent-septic complications of acute intestinal obstruction [10].

The incidence of fatal outcomes is also determined by postoperative complications, among which 10.8% are due to the progression of existing peritonitis and up to 5.2% to the development of abdominal abscesses due to the failure of the intestinal sutures. The incidence of anastomosis suture failure after intestinal resection is 6.8% due to the development of peritonitis. More than half of the cases (55.9%) of purulent-septic complications are accompanied by suppuration of the postoperative wound [11].

In 63.9% of cases, the cause of mortality in acute intestinal obstruction in elderly and senile patients is liver pathologies leading to the development of hepatic and renal failure [12].

There is also information about lung damage by a purulent-inflammatory process, in particular pneumonia, due to the translocation of microflora from the intestinal cavity into the systemic circulation. The incidence of postoperative pneumonia is 8.4% of cases [13].

In elderly and senile patients, thrombogenic complications develop in the postoperative period, leading to the development of pulmonary embolism, acute myocardial infarction, and acute cerebrovascular accident. There is evidence of causal relationships between these complications, which are based on the development of enteric insufficiency syndrome [14].

Thus, statistical data on the frequency of occurrence, features of the manifestation, course and outcome of the disease indicate that in elderly and senile patients, acute intestinal obstruction has its own characteristics. They are determined by the complexity of diagnosing the disease, the presence of concomitant pathologies, the high incidence of postoperative complications and mortality.

Main types and causes of development. Questions related to the cause-and-effect factors and mechanisms of the development of acute intestinal obstruction in elderly and senile patients are still open. This is what determines the unsatisfactory results of treatment of this contingent of patients.

Many clinicians believe that the most complete basic concepts of acute intestinal obstruction are presented by

the morphological and functional state of the affected intestine.

Impaired functional and intestinal activity is referred to as dynamic intestinal obstruction. In other cases, where there is a mechanical obstruction to the passage of intestinal contents, a distinction should be made between mechanical intestinal obstruction.

Functional obstructions in acute intestinal obstruction may be spasm or paralysis of the intestine due to impaired innervation and blood supply to the organ. An important role is given to the etiology of functional intestinal obstruction as a criterion for unsatisfactory results in the treatment of disseminated purulent peritonitis.

The development of acute intestinal obstruction due to the presence of a mechanical obstruction is referred to as mechanical intestinal obstruction. In particular, strangulated hernia, intestinal volvulus, and malformation are strangulated intestinal obstruction.

Obstruction of the intestinal lumen can be obturation of the intestinal lumen by a tumor, a foreign body, a fecal or bile stone, a bezoar, and even a tangle of roundworms. Cases have been described where the cause of acute mechanical intestinal obstruction was a hydrogel. A mixed form of intestinal obstruction is called intussusception.

Acute intestinal obstruction also differs in the level of intestinal damage. At the same time, lesions of the small intestine can be high and low, and lesions of the large intestine do not have such a distinction.

Cessation of the passage of intestinal contents in patients with dynamic intestinal obstruction occurs due to impaired motility (peristalsis) of the organ.

In clinical practice, a distinction is made between spastic and paralytic intestinal obstruction of a functional nature, or dynamic intestinal obstruction. Dynamic intestinal obstruction in the form of postoperative intestinal paresis is the most common in clinical practice.

In children's patients, mechanical intestinal obstruction, unlike dynamic, is characterized by a complete block of intestinal content passage due to the presence of an anomaly in this part of the gastrointestinal tract. Among them may be intestinal atresia, intestinal narrowing, complete intestinal obliteration, bifurcation of the intestine. Such variants of intestinal obstruction are already beginning to manifest themselves in the first hours of the child's life, and with a low location of the block - during the first few days of life.

However, modern literature increasingly describes cases from practice when a congenital intestinal anomaly

leads to the development of acute intestinal obstruction in adulthood and, in some cases, in old age. Most often, such variants of the lesion are manifested by Meckel's diverticulum, a congenital defect in the mesenteric of the small intestine and transverse colon, defects in the large gland.

Separately, such causes as abnormal length of the sigmoid intestine - dolichosigma, colon agangliosis - Hirschsprung's disease, unfinished bowel turn - Ladd's syndrome should be distinguished.

The most common cause of acute intestinal obstruction is abdominal adhesion disease. Spikes can also form locally as a result of surgery or inflammatory process. According to P. Ghimire and S. Maharjan such variants of intestinal obstruction occur in 45-65% of cases. At the same time, most of it is appendectomy [15].

In recent years, there has been a tendency to increase the number of patients as a result of the development of adhesive disease. This is due to the increase in the number of surgical operations performed. In this regard, today large-scale work is being carried out to study the fundamental and applied issues of adhesive intestinal obstruction and confirms the relevance of this problem. At the same time, the trend in the formation of problems of abdominal adhesion disease and the search for ways to prevent adhesive intestinal obstruction will only increase.

A particularly common cause of acute intestinal obstruction in elderly and senile patients can rightly be considered various intestinal tumors. The frequency of such intestinal lesions in gerontological patients can vary from 7% to 17% of cases [16]. In clinical practice, there are mainly tumors of the colon, which often lead to the development of acute intestinal obstruction in elderly and senile patients.

Acute intestinal obstruction in elderly and senile patients is mainly due to the development of transverse colon cancer. According to the WSES-2017 emergency guidelines in patients with colon and rectal cancer (obstruction and perforation), the frequency of this type of lesion is up to 20% of tumor lesions in coloproctology [17].

The literature also indicates that the oncological causes of acute intestinal obstruction may occur in extraintestinal forms of lesion, that is, cases when the tumor squeezes the large intestine from the outside. In such cases, tumors can be not only of a malignant nature. Among them are retroperitoneal sarcomas, prostate cancer, uterine cancer, bladder cancer or their metastases. Such forms of lesion also lead to the formation of acute

obturational intestinal obstruction in elderly and senile patients.

More rarely, the causes of acute intestinal obstruction in elderly and senile patients may be obturations of the intestinal lumen by various foreign bodies that were swallowed negligently.

According to A.O.Bankole et al., mechanical intestinal obstruction is a common and potentially fatal surgical emergency, which accounts for about 20% of all hospitalizations in emergency surgical departments among elderly and senile patients [4]. A group of clinicians set a goal - to determine the prognostic factors of morbidity and mortality in elderly and senile patients undergoing treatment for acute mechanical intestinal obstruction. To achieve this goal, a group of scientists conducted a prospective study of successive elderly and senile patients who showed signs of acute intestinal obstruction. Each patient underwent intensive care, a comprehensive clinical assessment and appropriate examinations.

The results showed that the most common causes of acute intestinal obstruction in elderly and senile patients were postoperative adhesion process (48.6%), tumor (25.7%), external hernia (15.2%) and intestinal inversion (5.7%). Eighty-four patients (80%) underwent surgery, while 21 patients (20%) received conservative treatment. One-factor analysis showed that dehydration, tachycardia (>90 bpm), pyrexia, abnormal levels of potassium, urea and creatinine, leukocytosis, the status of the American Society of Anesthesiologists (ASA) >III, intestinal resection, intraoperative blood loss >500 ml and duration of surgery >2 h were significant predictors of mortality ($P<0.05$). Multifactorial analysis showed that increased serum urea levels during hospitalization and ASA status above III were independent predictors of mortality, but none of the factors could independently predict the incidence. The most common postoperative complications and causes of death were wound infection (29.6%) and sepsis (66.7%). The mortality rate was 14.3%.

Thus, the most common cause of acute intestinal obstruction in elderly and senile patients was postoperative adhesion disease. Elevated serum urea levels and ASA status above III were independent predictors of mortality.

In endemic areas where the prevalence of parasitic diseases is high (regions with hot climates and predominant animal husbandry), intestinal obstructions can be observed from 3% to 9% as a result of the progression of ascariasis, with the formation of glomerular forms.

Acute intestinal obstruction as a result of obturation of the lumen with gallstones is considered not a rare case

of the etiology of intestinal obturation. The origin of this type of acute obturational intestinal obstruction is associated with the formation of a fistula between the gallbladder and the intestine (usually it is a cholecystoduodenal fistula). Obturation of the intestinal lumen with a gallbladder stone occurs gradually in the process of its migration, which in turn confuses clinicians and extends the time to decide on the need for surgery. It was estimated that the approximate diameter of the stone for intestinal obstruction should be at least 2-2.5 cm. At the same time, the most common places of obstruction are: the ileum (60%), the small intestine (35%) and the colon (5%) in conditions in which there is no stenosis in any of these segments.

Obturation with gallstones of the intestinal lumen is a rare complication of cholelithiasis, occurring in 0.3-0.5% of cases, which corresponds to 30-35 cases per million hospitalizations [19]. It reaches a frequency of 1-4% of the causes of intestinal obstruction in people under the age of 65 and can reach up to 25% in elderly and senile patients. The disease is more common in women, with a ratio of 3.5:11. At the same time, it is documented that up to 50% of patients have a history of cholelithiasis [20].

In addition to the factors of such intestinal obstruction, there are also factors depending on the age of the patient, with which it is assumed that the clinical manifestation differs, usually atypically, from that in young patients. The same semiology and semiotechnics make it difficult to approach the elderly and senile patient, make it difficult to challenge, causing changes inherent in aging, which, at the same time, can postpone or confuse the diagnosis.

Clinical symptoms of this type of acute intestinal obstruction in elderly and senile patients can be formed over several days. However, during this period, laboratory manifestations that are usually characteristic of this pathology (hypovolemia, inflammatory phenomena, bacterial translocation, insufficiency of vital organs and violation of the water-electrolyte balance) do not have a direct correlation with the course of the pathological process, which can sometimes lead to the lightning-fast development of septic complications [21].

From the point of view of imaging, it is recommended to have an adequate assessment of primary studies, which, if suspected intestinal obturation with gallstones, could help in the diagnosis and evidence of the famous Riegler triad: pneumobilization, expansion of the loops of the small intestine, direct or indirect visualization of the stone in the small intestine. Sometimes it is

possible to change the position of the gallstone in control X-rays. Thus, the use of this can help in diagnosing this type of acute intestinal obstruction in elderly and senile patients.

It is important to take into account the possibilities of the applied volume of surgical intervention in elderly and senile patients, since patients of this category are very complex.

Acute obturational intestinal obstruction with gallstones is a rare pathology that should be eliminated after a combination of appropriate clinical evaluation, the use of available additional tests and a constant, but not intentionally prolonged, comprehensive reassessment of the patient to determine the cause of the non-specific condition with which most of these elderly and senile patients come. To do this, it is important that the doctor has clinical experience and interpretation of all the elements that help to distinguish between possible differential diagnoses, as well as not to confuse or postpone timely intervention. At the same time, concomitant and recently emerging pathologies are recognized as another of the main aspects to be assessed and considered within the framework of the evolution of the disease, especially in the elderly because of their great influence on the prognosis of the pathological process and the results of treatment.

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KEKSA YOSHDAGI BEMORLARDA O'TKIR ICHAK TO'TILISHI

Xudoyberdiev S.S.

**O'zbekiston Respublikasi Sog'liqni saqlash vazirligi
shoshilinch tibbiy yordam ilmiy markazi Sirdaryo
mintaqaviy filiali**

ABSTRAKT

O'tkir ichak to'siqlarining barcha jihatlarini batafsil tasvirlagan ilk qadimgi olimlardan biri Yevropada "Avicenna" nomi bilan mashhur bo'lgan Abu Ali Ibn Sino (980-1030) hisoblanadi. Uning "Tibbiyot kanoni" (3-kitob, 16-qism, 3-qism) ko'p tomlik davolashda o'tkir ichak to'siqlarini tasvirlab berishi ushbu patologiyaning nomini "qoolinj" va "ehtebase sofl" (stolni saqlash) deb taqdim etdi. "Qoolinj" va "ilavos" – defekatsiyada qiyinchilikka olib keluvchi og'riq sindromi bilan xarakterlanadigan ichak kasalliklari. "Qoolinj"ning sabablari katta ichakda va uning atrofida bo'lsa, "ilavos"ning kelib chiqishi ingichka ichakda bo'ladi. Alomatlar va ularning sabablariga ko'ra "qoolinj" va "ilavos" turli turlarga kiradi. Obstruktiv tipni zamonaviy tibbiyotda qorin to'siqlariga teng deb hisoblash mumkin. Avicennaning so'zlariga ko'ra, "qoolinj" va "ilavos" ning sababi najas va gazning o'tishini to'sib qo'yadigan to'siq bo'lishi mumkin. Shunday qilib, bu ichak va qorin og'rig'ining og'irlashishiga olib keladi.

Haqiqatda tasvirlangan o'tkir ichak to'siqlarining etiologiyasi, patogenez va klinik ko'rinishining ko'p jihatlariga to'g'ri keladi, ularning hozirgi muammolari biz ushbu maqolada tasvirlangan.

Tayanch iboralar: o'tkir ichak to'siqlari, keksa va senil yosh, me'yor

ОСТРАЯ КИШЕЧНАЯ НЕПРОХОДИМОСТЬ У БОЛЬНЫХ ПОЖИЛОГО И СТАРЧЕСКОГО ВОЗРАСТА

Худойбердиев С.С.

**Сырдарьинский областной филиал
Республиканского Научного Центра Экстренной
Медицинской Помощи министерства
здравоохранения Республики Узбекистан**

ABSTRAKT

Один из первых античных ученых, который подробнейшим образом описал все аспекты острой кишечной непроходимости, считается Абу Али Ибн Сино (980-1030 годы), известный в Европе как Авиценна. Его описание острой кишечной непроходимости в многотомном трактате «Канон врачебной науки» (книга 3, часть 16, трактат 3) представляло название данной патологии как «qoolinj» и «ehtebase sofl» (удержание стула). «Qoolinj» и «ilavos» - это кишечные заболевания, характеризующиеся болевым синдромом, которые приводят к затруднению дефекации. Причины "qoolinj" находятся в толстой кишке и вокруг нее, в то время как происхождение "ilavos" находится в тонком кишечнике. Исходя из симптомов и их причин, «qoolinj» и «ilavos» включены в различные типы, которые обструктивный тип может считаться эквивалентом непроходимости кишечника в современной медицине. Авиценна сказала, что причиной "qoolinj" и "ilavos" может быть препятствие, которое блокирует прохождению кала и газов. Таким образом, это приводит к сильному растяжению кишечника и болям в животе.

Поистине описанное в реальности соответствует многим аспектам этиологии, патогенеза и клинического проявления острой кишечной непроходимости, о современных проблемах которой мы излагаем в данной обзорной статье.

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