



Age- and gender-specific characteristics of the course of acute intestinal obstruction caused by colorectal cancer (a retrospective study)

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Abstract. Acute intestinal obstruction (AIO) of neoplastic origin is one of the most complex emergency conditions in abdominal surgery. This condition is associated with late diagnosis of colorectal cancer (CRC), high rates of postoperative complications and mortality, particularly in patients of various age groups. The study aimed to conduct a comprehensive analysis of the clinical and oncological characteristics of patients with AIO caused by CRC. A retrospective comparative analysis was conducted of the medical records of 112 patients who were treated at the Municipal Emergency Hospital for acute pancreatitis verified as a complication of CRC. The study confirmed that acute kidney injury is predominantly a problem among elderly patients (mean age 70.9 ± 1.02 years). In the age groups up to 45 years, 45-59.9 years and 60-75 years, the proportion of men was 66.7%, 54.5% and 65%, respectively, in contrast to the group over 75 years, where the proportion of men was 28.9%. Analysis by age group revealed significant differences. The age group over 75 years had the highest proportion of women (71.1%). Patients in the 45-59.9 years group had the highest mortality rate (36.4%), indicating an aggressive course of the disease. Patients in the 60-75 age group constituted most cases (53.6%); their mortality rate was 10%, and they had the lowest incidence of stage IV cancer. In the under-45 age group (2.7% of all patients), the mortality rate was zero; however, a high percentage of advanced stages was noted (100% had stage III-IV disease). Across the entire cohort, 93.8% of patients had stage III-IV disease; a stoma was created in 60.7% of cases, and the overall mortality rate was 17.0%. The study established that acute intestinal obstruction of tumour aetiology is predominantly a complication of advanced (stage III-IV, 93.8%) colorectal cancer, the course, surgical management and mortality rate of which exhibit marked gender- and age-specific characteristics

Keywords: age groups; retrospective analysis; Hartmann's procedure; stoma; mortality; cancer screening

Introduction

Colorectal cancer (CRC) is one of the most pressing challenges in modern oncology and emergency surgery, requiring the constant refinement of diagnostic and treatment protocols. In the context of a globally ageing population and a simultaneous trend towards rising incidence among younger people, the clinical picture and course of this disease are undergoing significant changes. The problem

of treating complicated forms is of particular relevance, among which acute intestinal obstruction (AIO) of tumour origin predominates, radically altering the paradigm of healthcare provision. The research relevance is determined by the requirement to optimise surgical tactics in emergencies, where the surgeon is forced to balance the radical nature of oncological intervention against the

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high risks of perioperative mortality, in the context of severe endotoxemia and comorbidity. According to a global study by H. Sung *et al.* [1], CRC consistently ranks among the leading causes of global morbidity and mortality, with the proportion of urgent cases among newly diagnosed patients on the rise. As noted by S.G. Patel *et al.* [2] in their large-scale study, there is a steady global trend towards an increase in the incidence of “early” colorectal cancer (in patients under 50 years of age). Due to a lack of cancer awareness in this group, the disease is predominantly diagnosed at late stages and often manifests specifically as acute colitis, characterised by an aggressive biological profile. At the other end of the age spectrum are elderly patients. J. Han *et al.* [3], in a systematic review and meta-analysis of 15 studies (45,288 patients), demonstrated that frailty is an independent predictor of mortality in patients with CRC, more than doubling the risk of an adverse outcome regardless of chronological age. In cases of acute obstruction, these factors drastically narrow the window of therapeutic options, often forcing surgeons to abandon radical interventions in favour of palliative stoma formation. In the current scientific literature, the issue of surgical treatment for complicated CRC is discussed quite extensively. R. Siegel *et al.* [4] focused on the phenomenon of so-called “young cancer”. Their study demonstrated that in patients under 50 years of age, colorectal cancer predominantly manifests in later stages, and often the first symptom is obstructive ileus, which requires a more aggressive surgical approach. A significant contribution to research of the problem was made by A.A. Elrish *et al.* [5], who assessed risk factors for mortality in cases of left-sided tumour obstruction. The researchers found that the presence of comorbid conditions in elderly patients significantly increases the risk of postoperative mortality, necessitating more careful selection of candidates for primary anastomosis. In addition to survival, patient rehabilitation is a critical aspect: S. MacDonald *et al.* [6] demonstrated in a systematic review that urgent stoma creation significantly impairs patients’ quality of life, necessitating the implementation of targeted rehabilitation approaches. Despite the significant number of publications devoted to the problem of complicated colorectal cancer, several issues remain insufficiently addressed. In particular, there is a lack of comprehensive comparative studies that would analyse in detail the specific course of complicated colorectal cancer of tumour origin across the age spectrum within the context of Ukrainian emergency surgery. The direct influence of gender and age on the choice of surgical strategy (the frequency of stoma creation versus primary anastomoses) and the pattern of perioperative mortality in emergency hospitals remains understudied. This necessitates the present study.

The study aimed to conduct a comprehensive analysis of the clinical and oncological characteristics of patients with acute intestinal obstruction caused by colorectal cancer, including a detailed examination and comparison of treatment outcomes and a prediction of quality of life in patients across different age groups.

Literature overview

The epidemiology and pathogenesis of GCN in colorectal cancer. Acute obstructive colonic obstruction is caused by malignant tumours in most cases. According to data from M. Pisano *et al.* [7], obstructive tumours are most located in the left half of the colon (>75% of cases), whereas tumours in the right half tend to grow exophytically and are less likely to cause complete obstruction. The pathogenesis of CIB is a cascade of interrelated processes: obstruction leads to increased intraluminal pressure, ischaemia and necrosis of the intestinal wall, fluid sequestration with the development of dehydration and electrolyte disturbances, and the translocation of bacteria into the systemic circulation, triggering a systemic inflammatory response syndrome that can progress to multiple organ failure. With a competent ileocecal valve, a closed loop is formed, and, as noted by C. Krutsri *et al.* [8], according to Laplace’s law, the cecum is subjected to the greatest stretching, where diastatic perforation most often occurs, leading to faecal peritonitis with a mortality rate exceeding 50%.

Age and gender considerations. CRC is predominantly a disease of the elderly, in whom comorbidities significantly complicate the course of the disease and its treatment [9]. At the same time, S.G. Patel *et al.* [2] demonstrated that in young patients (under 50 years of age), CRC – so-called “early-onset colorectal cancer” – has a more aggressive course due to delayed diagnosis and different tumour biology. C. Eng *et al.* confirmed that symptoms are often misinterpreted for months as manifestations of haemorrhoids or irritable bowel syndrome, and the lack of screening leads to tumours being detected only at the stage of complications [10]. R.L. Siegel *et al.* [11], in a large-scale study of global trends in CRC incidence among young adults, found that in most countries there is a steady increase in CRC incidence among people under 50 years of age, with the most pronounced increase in the 20-29 and 30-39 age groups. The authors attributed this trend to lifestyle changes, in particular the prevalence of obesity, physical inactivity and dietary patterns in young populations, which necessitates a review of the age criteria for CRC screening. A.N. Holowatyj *et al.* [12] and O. Marx *et al.* [13] demonstrated that young patients are more likely to present with poorly differentiated cancer, signet-ring cell carcinoma and mucinous adenocarcinoma, predominantly localised in the distal segments (up to 70-80%) and with a higher incidence of synchronous metastases. Men are more likely to develop CRC than women in all age groups [14]. S. Tsokkou *et al.* [15] attribute this to the protective role of oestrogen, a higher prevalence of risk factors among men – red meat, alcohol, smoking, abdominal obesity – as well as differences in the molecular pathways of tumour development and the composition of the gut microbiome, which were studied in detail by Y. Rodríguez-Santiago *et al.* [16].

Diagnosis and modern treatment approaches. M. Pisano *et al.* [7] define CT scanning of the abdominal organs in the WSES guidelines as the “gold standard” for diagnosing acute intestinal obstruction, as it can confirm

the diagnosis, determine the level of obstruction, identify complications and assess the presence of metastases. The choice of treatment strategy depends on the patient's condition and the surgical risk. L. Tan *et al.* [17] demonstrated in a systematic review that resection with primary anastomosis is only possible in stable patients without peritonitis, whereas the Hartmann procedure is the safest option for obstruction of the left-sided segments, although it requires reoperation in the future. S. MacDonald *et al.* [6] demonstrated that urgent stoma creation significantly impairs patients' quality of life, necessitating the implementation of targeted rehabilitation approaches. An alternative to surgical intervention is endoscopic stenting (SEMS), which, according to M. Pisano *et al.* [7], can convert an urgent situation into an elective one and be used for radical surgery under significantly more favourable conditions.

Materials and Methods

A retrospective cohort study was conducted at the surgical department of the Municipal Emergency Hospital. The study material consisted of the medical records of 112 inpatients aged between 37 and 89 years who were treated for verified CRC complicated by acute intestinal obstruction between 1 January 2023 and 31 March 2025. Inclusion criteria were verified colorectal cancer complicated by acute intestinal obstruction, hospitalisation during the specified period, and the availability of complete medical records. Patients were excluded in the absence of morphological confirmation of the diagnosis, incomplete medical records, or in cases of acute intestinal obstruction of other aetiologies, such as adhesive disease or intestinal volvulus.

All patients were divided into four groups based on their age:

- Group 1 (<45 years): 3 patients (1 woman, 2 men), with an average age of 39.3 years.
- Group 2 (45-59 years): 11 patients (5 women, 6 men), with an average age of 52.1 years.
- Group 3 (60-75 years): 60 patients (21 women, 39 men), with an average age of 69.3 years.
- Group 4 (>75 years): 38 patients (27 women, 11 men), with an average age of 81.4 years.

The division into age groups is based on clinical and demographic data regarding the incidence of colorectal cancer and the risk of complications in different age groups [18].

An analysis was conducted of clinical, oncological and surgical parameters and treatment outcomes for each age group. The study incorporated the following variables: patient age, gender, mode of hospital admission (emergency or elective), tumour type and stage according to the TNM classification, presence of metastases, extent and type of surgery (Hartmann's procedure, resection with primary anastomosis or palliative stoma), and the radicality of the surgical intervention (R0 – microscopically negative resection margins, R1/R2 – positive margins or macroscopically residual tumour, analysed as a categorical variable), presence of a previous diagnosis or newly diagnosed cancer,

mortality and postoperative complications, as well as parameters of comorbidity and concomitant diseases. Definitions and measurement methods included histological and morphological confirmation of tumour stage, documentation of the extent of surgery in the medical record, and recording of mortality as a hospital death.

Quantitative variables were presented as mean and standard deviation ($M \pm SD$), whilst categorical variables were presented as percentages. The study did not contravene ethical standards (Extract from the minutes of the 5th meeting of the Ethics Committee of Petro Mohyla Black Sea National University dated 06 November 2025). The study complies with international ethical standards and current legislation on the protection of personal data [19].

Results and Discussion

The mean age of patients in the overall sample was 70.9 ± 1.02 years, which unequivocally confirms the global trend of this condition being more prevalent among middle-aged and elderly individuals, who are characterised by a decline in the body's physiological reserves. In the gender distribution of the overall cohort, there was a slight predominance of men, who accounted for 51.8% (58 patients) with a mean age of 68.2 years. Women accounted for 48.2% (54 patients), but their mean age was significantly higher at 73.9 years, indicating a later onset of complicated forms of colorectal cancer in the female population.

An analysis of oncological status revealed an unfavourable trend, which represents a critical problem in modern emergency surgery: the vast majority of patients (93.8%) were already in advanced stages of the tumour process at the time of admission, specifically stage III or IV colorectal cancer. This figure clearly indicates a prolonged asymptomatic course of the disease, the absence of effective preventive screening at the outpatient stage, and patients seeking specialist medical care only at the stage of critical intestinal obstruction, when there is a direct threat to life. The overall rate of radical surgical interventions across the entire cohort was only 32.1%, which is a direct consequence of late hospitalisation. In most cases, due to local tumour spread, the presence of distant metastases, or the patient's poor general condition, surgeons were forced to abandon radical tumour resection, resorting to palliative or two-stage procedures. Overall, the frequency of various types of stoma formation (both palliative and as part of Hartmann's procedure) in the study cohort reached 60.7%. This illustrates the severity of the condition of patients with signs of severe endotoxemia and peritonitis, who objectively could not tolerate primary restoration of intestinal continuity (primary anastomosis). The overall hospital mortality rate stood at 17.0% (19 patients died in the acute ward), which is a direct reflection of the aggressiveness of acute oncological conditions and the difficulty of treating such patients.

A detailed analysis revealed significant differences between the age groups, as shown in Table 1.

Table 1. Comparative characteristics of patients with chronic kidney disease by age group

Indicator	Group 1 (<45 years)	Group 2 (45-59.9 years)	Group 3 (60-75 years)	Group 4 (>75 years)
Number of patients, n (%)	3 (2.7%)	11 (9.8%)	60 (53.6%)	38 (33.9%)
Average age, years ($M \pm M$)	39.3	52.1	69.3	81.4
Males, n (%)	2 (66.7%)	6 (54.5%)	39 (65%)	11 (28.9%)
Females, n (%)	1 (33.3%)	5 (45.5%)	21 (35%)	27 (71.1%)
Degree III, n (%)	1 (33.3%)	3 (27.3%)	31 (51.7%)	19 (50%)
Degree IV, n (%)	2 (66.7%)	6 (54.5%)	26 (43.3%)	17 (44.7%)
Hartmann's operation, n (%)	0 (0%)	1 (9%)	7 (11.7%)	6 (15.8%)
Resection with anastomosis, n (%)	1 (33.3%)	1 (9%)	9 (15%)	4 (10.5%)
Palliative stomas, n (%)	2 (66.7%)	5 (45.5%)	25 (41.7%)	13 (34.2%)
Radicalism (R0), n (%)	1 (33.3%)	2 (18.2%)	23 (38.3%)	10 (26.3%)
Stoma formation, n (%)	2 (66.7%)	6 (54.5%)	39 (65%)	21 (55.3%)
Surgery patients, %	3 (100%)	8 (72.7%)	51 (85%)	30 (79%)
Mortality rate, n (%)	0 (0%)	4 (36.4%)	6 (10%)	9 (23.7%)

Source: compiled by the authors

An in-depth intergroup analysis of the available data revealed significant and, in some cases, paradoxical differences in the characteristics of disease progression depending on age. The trends in the ratio of cancer stages (stage III versus stage IV) across different age cohorts deserve particular attention. Analysis of the tabular data clearly demonstrates that in young and middle-aged patients (Groups 1 and 2), the percentage of patients with a generalised process (stage IV) consistently exceeds the percentage of patients with regional tumour spread (stage III). Thus, in the under-45 age group, this ratio is 66.7% versus 33.3%, and in the 45-59.9 age group, it is 54.5% versus 27.3% in favour of terminal stage IV. In contrast, in elderly and very elderly patients (Groups 3 and 4), this proportion is reversed: stage III predominates (51.7% in the 60-75 age group and 50.0% in the over-75 age group), whilst the frequency of stage IV decreases to 43.3% and 44.7% respectively. This clinical phenomenon indicates significantly higher biological aggressiveness of the tumours and their tendency towards rapid early metastasis, specifically in patients of younger working age.

The youngest cohort of patients (aged under 45), although constituting the smallest proportion of the sample ($n = 3$, 2.7%), demonstrated the unique clinical features of so-called “young” cancer. Despite 100% surgical activity (all 3 patients underwent surgery, 100%) and zero mortality in this group, which is linked to the high compensatory capacity of the young body and the absence of severe comorbidities, the overall oncological prognosis proved to be the worst. All 100% of these patients had advanced stages, and as noted above, 66.7% presented with an already established stage IV tumour process. The high biological aggressiveness of the tumour and late diagnosis meant that in 66.7% of cases, surgical intervention was limited to the creation of a palliative stoma without removal of the primary tumour. Resection with intraoperative anastomosis, which ensured oncological radicality, was successfully performed in only 1 patient (33.3% of patients in this group).

The results of the analysis of the group of patients aged 45-59.9 years ($n = 11$, 9.8%) are particularly telling, as this

group demonstrated the most unfavourable treatment outcome of all cohorts. Several critical factors coincide at the point: an aggressive tumour process (54.5% had stage IV disease) coincides with the onset of a decline in the body's physiological reserves. This resulted in surgical activity in this group amounting to only 72.7% (the lowest rate among all age groups, meaning that surgical treatment was not possible for over a quarter of patients due to their terminal condition. Moreover, the radicality of interventions in this cohort fell to an all-time low of 18.2%. Surgeons were forced to perform palliative stoma procedures in the majority of cases (45.5%). Consequently, this age group had the highest peak in in-hospital mortality, which reached an unprecedented 36.4%. Such a high figure (mortality in over a third of patients) directly indicates severe decompensation of the patients' condition even before hospitalisation.

Patients aged 60-75 years ($n = 60$) constituted the main and most representative group of patients, accounting for more than half of the sample (53.6% of the total cohort). This group was characterised by a “classic” course of GCN. A distinct therapeutic window is observed: a high percentage of surgical activity (85% of patients underwent surgery) is combined with the best tumour resectability rates. Due to the lower frequency of disease generalisation (stage IV was detected in 43.3%, the lowest rate among all groups), it was in this cohort that surgeons achieved the highest rate of radical surgery – 38.3%. At the same time, treatment strategies were significantly influenced by comorbidities. Aware of the risks of primary anastomosis in cases of obstruction, surgeons opted for safer two-stage procedures: the frequency of stoma creation within the overall structure of operations in this group reached a peak of 65.0% (of which 41.7% were palliative stomas, and 11.7% were Hartmann's procedures with tumour removal). Resection with primary anastomosis was performed in only 15% of cases. A balanced and cautious approach to determining the extent of the procedure maintained the mortality rate in this large group at 10.0%, which is a fully expected and scientifically acceptable figure for geriatric emergency oncological surgery, in stark contrast to the high mortality rate in the previous group.

According to the data obtained, the group of elderly patients (over 75 years of age, $n = 38$, 33.9%) proved to be the most challenging for surgical management. Most of these patients had depleted physiological reserves, which required the surgical team to exercise the utmost surgical caution. The surgery rate was slightly lower, at 79.0%. The trend in the choice of surgical procedure is telling: this group recorded the highest percentage of classic Hartmann's procedures performed – 15.8% (by comparison, this figure increased linearly with age: from 0% in the <45 years group, to 9.1% in the 45–59.9 years group, and to 11.7% in the 60–75 years group). This confirms that the older the patient, the more often surgeons reject high-risk anastomoses in favour of the safe creation of a terminal colostomy. The proportion of radical operations in the oldest group fell again to 26.3%, whilst the main method of managing obstruction was a minimally invasive palliative stoma (34.2%).

In addition to surgical characteristics, a striking and radical shift in the gender ratio emerged as a unique demographic feature of the over-75 age group. Whilst men consistently outnumbered women in all previous age groups (66.7% in the first, 54.5% in the second and 65.0% in the third groups), among patients aged over 75, the proportion of women suddenly rose to an absolute majority – 71.1%, whilst men accounted for only 28.9%. This phenomenon has not a clinical but a profound demographic basis and correlates directly with national demographic indicators in Ukraine, where the average life expectancy for men is only 66.4 years, and for women, 76.2 years [20]. Accordingly, a significant proportion of the male population simply does not live to the age at which senile colorectal cancer manifests. The high mortality rate in this age cohort, which reached 23.7%, confirms a fundamental surgical principle: for elderly patients, the very presence of intestinal obstruction, severe cancer-related toxicity and the need for general anaesthesia constitutes a critical, shock-inducing burden. Their exhausted bodies are often unable to cope with this stress in the early postoperative period, regardless of whether the extent of the surgical intervention was radical or, conversely, palliative.

A retrospective analysis of the treatment outcomes of 112 patients with tumour-related chronic kidney disease reveals clear patterns in the course of the disease depending on age and gender. The data obtained regarding the high frequency of advanced stages (93.8% of patients had stage III–IV disease) are fully consistent with the results of international studies. In the works of F. Shariff *et al.* [9] and I.S. Coman *et al.* [19], who studied the pattern of emergency admissions for colorectal cancer, it was noted that in the absence of aggressive screening programmes, most patients are admitted to surgical wards precisely at the stage of regional or distant metastasis. This supports the argument that the manifestation of the disease as acute obstruction is not a sudden acute condition, but the logical outcome of a prolonged, asymptomatic and undiagnosed oncological process, which calls for a review of national approaches to early diagnosis. Of scientific

interest is the specific course of ACG identified in the present study in patients aged under 60 years. In particular, in the youngest group (<45 years), despite 100% survival, 66.7% of patients were admitted with pre-existing distant metastases (stage IV).

This alarming phenomenon is explained in a large-scale study by S.G. Patel *et al.* [2], who examined in detail the biological profile of early-onset colorectal cancer. The authors demonstrated that in young patients, tumours are characterised by an aggressive histological structure and a tendency towards rapid micrometastasis. As in the current study, where 66.7% of young patients required only palliative stoma formation, global practice indicates that radical surgical treatment is often impossible due to delayed diagnosis. Concurrently, in the sample of patients aged 45–59.9 years from the current study, the highest overall mortality rate (36.4%) and the lowest rate of radical surgery (18.2%) were recorded. These data complement the findings of C. Krutsri *et al.* [8]. Their study on emergency surgery noted that high mortality in middle-aged patients with obstructive intestinal obstruction is often caused by the development of irreversible abdominal sepsis and endotoxemia, as these patients, having a high pain threshold and high social activity, often delay seeking medical help until the stage of complete decompensation of physiological reserves. The surgical approach adopted for patients in the main age group (60–75 years) reflects a classic approach to managing acute obstruction. The presence of comorbidities in 55% of these patients led to a high frequency of stoma creation (65% of cases), which maintained mortality at 10% whilst achieving the highest percentage of resections (38.3%).

The findings of the present study are fully supported by the systematic review and meta-analysis by L. Tan *et al.* [17]. The study emphasised that, in cases of severe intestinal hypertension, intestinal wall ischaemia and systemic inflammation, attempts to create a primary inter-intestinal anastomosis carry a critically high risk of failure. Therefore, the global paradigm, as well as the practical data from the current study, confirms that the choice in favour of two-stage operations (in particular Hartmann's procedure) and preventive stoma creation is the most justified compromise between oncological radicalism and surgical safety for this age group. The clinical scenario in elderly patients (>75 years) was primarily determined by the burden of comorbidities. The high postoperative mortality rate (23.7%) in this group is to be expected and is confirmed in the works of many contemporary authors. In particular, H. Zhou *et al.* [3] demonstrated in their study that the main predictor of poor outcomes and high mortality in such patients is the frailty index. For this group of patients, the key principle is life preservation, which explains the low percentage of radical resections (26.3%) and the predominance of palliative stomas (34.2%) in the sample. Furthermore, the demographic shift towards an absolute predominance of women (71.1%) in the older age group also has a scientific basis. J. Rodríguez-Santiago *et al.* [16] noted that gender

dimorphism in CRC is driven by different molecular mechanisms of tumour development and survival.

The results of the present study confirm that patient age is a significant factor during acute intestinal obstruction associated with colorectal cancer. As shown by P.J. Webster *et al.* [21], elderly patients are more likely to be admitted to the department as emergencies and less likely to undergo radical surgery or adjuvant chemotherapy, due to a high burden of comorbidity and limited physiological reserves. Similar patterns are observed in the present study: patients over 75 years of age had the highest proportion of palliative interventions and a conservative approach to stoma creation, whilst radical resections were significantly less common than in the 60-75 age group. C.A.M. Menegozzo *et al.* [22] demonstrated that in elderly patients, emergency surgery for complicated colorectal cancer is associated with a higher incidence of in-hospital mortality and postoperative complications compared with elective procedures, underscoring the significance of timely detection and adequate preoperative management. In the current study, it was similarly noted that patients aged 45-59.9 years exhibited the highest in-hospital mortality (36.4%), which is partly attributed to the combination of an aggressive tumour biological profile and delayed presentation for medical care, whereas in the 60-75 age group, careful selection of surgical methods maintained mortality at 10%. This therefore suggests that the optimisation of surgical management for acute intestinal obstruction should incorporate the patients' age and clinical characteristics. Older patients require a balanced approach that minimises the risks of postoperative complications and takes comorbidity into account, whereas younger patients with advanced-stage tumours require the most radical treatment possible, provided their condition permits it.

When combined with data on life expectancy in Ukraine (66.4 years for men versus 76.2 years for women) [20], this explains why the cohort of geriatric patients with GCN is predominantly female. Overall, the high percentage of stoma formation across the entire study cohort (60.7%) confirms the widely held view that CRC of neoplastic origin remains an urgent condition with limited opportunities for primary radical treatment, requiring further optimisation of both surgical strategies and a systematic approach to the early detection of colorectal cancer.

Conclusions

Based on a comprehensive retrospective analysis of the treatment outcomes of 112 patients with tumour-related acute intestinal obstruction, a number of well-founded conclusions can be drawn regarding the clinical course, choice of surgical management, and prognosis of this complication. Acute intestinal obstruction as a marker of critical neglect of the oncological process. It has been proven that the development of acute obstructive ileus in the context of colorectal cancer is a direct manifestation of a long-standing, asymptomatic and undiagnosed tumour

process. Most patients in the overall cohort (93.8%) are admitted to hospital already at advanced stages of the disease (stage III or IV). This contributes to an exceptionally low overall rate of radical oncological surgery, which stands at only 32.1%. The severity of the patients' condition, the presence of marked endotoxemia and peritonitis, forces surgeons to routinely forgo primary anastomosis: the frequency of various types of stoma formation reaches 60.7%. The overall in-hospital mortality rate of 17.0% confirms the aggressiveness of this urgent condition.

Paradoxes and high mortality rates in young and middle-aged patients. Age is a key factor determining the prognosis and surgical approach in gastric cancer. The study confirmed the existence of the phenomenon of aggressive "young cancer". In patients aged under 45, despite zero postoperative mortality and 100% surgical activity, the worst oncological prognosis is observed: 100% of these patients have advanced stages, and 66.7% present with a verified stage IV tumour. Radical surgery in this group can only be performed in 33.3% of cases. The most unfavourable scenario is characteristic of patients aged 45-59.9 years: the combination of high tumour biological aggressiveness (54.5% have stage IV disease) with a reduction in the body's physiological reserves leads to a catastrophic peak in in-hospital mortality, reaching 36.4%. The rate of radical treatment in this cohort falls to a low of 18.2%.

The optimal surgical window is in elderly patients (aged 60-75). Patients aged 60-75 years constitute most cases (53.6%) and demonstrate the most balanced treatment outcomes. Due to the lower frequency of disease generalisation (43.3% with stage IV disease), this cohort achieved the highest rate of radical surgery – 38.3%. However, given the high prevalence of comorbidities, surgeons opt for safe two-stage procedures: the frequency of stoma creation reaches a peak of 65.0%. This balanced approach maintained mortality at a scientifically acceptable level of 10.0%. A cautious approach and a gender shift in geriatric patients (>75 years). In elderly patients (over 75 years), a cautious surgical approach predominates, with the extent of intervention minimised due to the total depletion of the body's reserves. The proportion of radical operations falls to 26.3%, whilst the main treatment methods are the creation of a palliative stoma (34.2%) and Hartmann's procedure (15.8%). The high mortality rate (23.7%) confirms that for these patients, surgical intervention and cancer-related toxicity constitute a critical shock load. Furthermore, a sharp change in the gender ratio has been observed: whilst men consistently predominate in the under-75 age groups, women account for 71.1% of patients aged over 75. This correlates directly with Ukraine's national demographic indicators, where men live on average to 66.4 years and often do not live to see the age at which senile colorectal cancer manifests.

Future research could explore the development of tailored management protocols for patients of different age and gender groups with acute intestinal obstruction

associated with colorectal cancer, with a view to improving the efficacy and safety of surgical treatment.

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Conflict of Interest

None.

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Вікові та статеві особливості перебігу гострої кишкової непрохідності, зумовленої колоректальним раком (ретроспективне дослідження)

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Анотація. Гостра кишкова непрохідність (ГКН) пухлинного генезу є одним із найскладніших ургентних станів в абдомінальній хірургії. Дана патологія асоціюється з пізньою діагностикою колоректального раку (КРР), високим рівнем післяопераційних ускладнень та летальності, особливо у пацієнтів різних вікових груп. Метою дослідження було провести комплексний аналіз клінічних та онкологічних характеристик пацієнтів з ГКН, спричиненою КРР. Було проведено ретроспективний порівняльний аналіз історій хвороб 112 пацієнтів, які перебували на лікуванні у КНП ММР «Міська лікарня швидкої медичної допомоги» з приводу ГКН, верифікованої як ускладнення КРР. Дослідження підтвердило, що ГКН є переважно проблемою пацієнтів похилого віку (середній вік $70,9 \pm 1,02$ років). У вікових групах до 45 років, 45-59,9 років та 60-75 років відсоток чоловіків був 66,7 %, 54,5 % та 65 % відповідно, на відміну від групи більше 75 років, де відсоток чоловіків склав 28,9%. Аналіз за віковими групами виявив значні відмінності. У віковій групі >75 років був найвищий відсоток жінок (71,1 %). У пацієнтів групи 45-59,9 років була найбільша летальність (36,4 %), що свідчить про агресивний перебіг захворювання. Пацієнти групи 60-75 років склали основну масу хворих (53,6 %) у них летальність становила 10% та найменший рівень раку IV стадії. У групі <45 років (2,7% від усіх пацієнтів) летальність була нульовою, однак відзначався високий відсоток занедбаних стадій (100 % мали III-IV стадію). Загалом по всій когорті 93,8 % пацієнтів мали III-IV стадію, стома сформована у 60,7 % випадків, загальна летальність склала 17,0 %. Встановлено, що гостра кишкова непрохідність пухлинного генезу переважно є ускладненням занедбаного (III-IV стадії, 93,8%) колоректального раку, перебіг, хірургічна тактика та рівень летальності при якому мають виражену статево-вікову специфіку

Ключові слова: вікові групи; ретроспективний аналіз; операція Гартмана; стома; летальність; онкологічна настороженість