

INTESTINAL OBSTRUCTION CAUSED BY SYNCHRONOUS COLORECTAL CANCER AND HEPATIC FLEXURE – A CASE REPORT

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ABSTRACT

Introduction. Obstruction is an acute condition of the abdominal cavity termed “acute abdomen”. This condition is managed surgically with an emergency procedure. Obstruction is not, however, a homogenous disease entity. Rather, it is a set of conditions causing similar symptoms. One of the reasons for developing obstruction may be cancer of the colon.

Aim. The aim of this paper was to present a case of intestinal obstruction caused by a synchronous colorectal cancer.

Materials and methods. This work presents a diagnostic procedure conducted in an Emergency Department and a surgical treatment carried out in the General Surgery Teaching Hospital concerning an 81-year old patient who reported symptoms of intestinal obstruction.

Case study. A patient with typical symptoms of intestinal obstruction reported to the Emergency Department. He manifested: retention of gases and constipation lasting for a few days, abdominal distension, abdominal pain, and general weakness. Auscultatory examination detected high-pitched tinkles, X-ray of the abdominal cavity – the presence of multiple gas-fluid levels. Rectal examination revealed rectal tumor. Obstruction was diagnosed and hospitalization and surgical treatments were advised, to which the patient consented. On the day the patient was admitted, a Miles’ operation was performed. During a routine inspection of the abdominal cavity, a tumor in the hepatic flexure was also

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detected. It was decided to carry out a right hemicolectomy. No postsurgical complications occurred in the postoperative period. Parenteral nutrition was administered. The patient was discharged in a good general condition and advised to continue his therapy in the Outpatient Oncology Clinic, having received the result of the histopathological test.

Results and discussion. The phenomenon of the co-occurrence of neoplasms in various organs has been known for quite some time. Often, neoplasms are located far away from each other, and sometimes two or more tumors are detected within the same organ. Synchronous neoplastic tumors within the colon are well documented, and their incidence is estimated by various authors to range from 1.02% to 12.4%.

Conclusions. A synchronous cancer of the colon is so common that each neoplasm of this organ necessitates a thorough inspection of the entire intestine.

Key words: obstruction, synchronous cancer, colon cancer, rectal cancer

INTRODUCTION

Obstruction (*ileus*) is an umbrella term for a broad set of non-homogeneous disease entities which are manifested by similar symptoms. The first group of such diseases is called paralytic ileus (*ileus paralyticus*), often termed “non-surgical intestinal obstruction”.

The second group, called mechanical ileus (*ileus mechanicus*), refers to the inhibiting of the intestinal passage by an obstruction located in any section of the small or large intestine [18]. This condition usually requires surgical treatment.

There exist three basic mechanisms for mechanical ileus:

- strangulation (*strangulatio*),
- occlusion (*obturatio*),
- intussusception (*invaginatio*).

Typical features of intestinal obstruction involve: retention of gases, high-pitched tinkles, general weakness, arterial hypotension, tachycardia, disturbances of water and electrolyte equilibrium, and acidosis [18]. The most frequent cause of intestinal obstruction in the occlusion mechanism is colon cancer [18]. This type of cancer is the most frequent neoplasm found in the human population [9]. Unfortunately, it very quickly and very easily leads to metastases. Liver metastases are detected in more than 60% of patients with colon cancer upon their deaths [15]. Metastatic tumors of the colon are very common – this problem results in 1.5 million new cases worldwide annually. In the USA alone, approximately 130 thousand new cases are diagnosed annually [11, 20]. In Poland, it ranks as the second most frequent malignant cancer with respect to incidence. Each year about

10 thousand new cases are reported [9, 18]. Half of the patients with colon cancer manifest metastases to the liver, including synchronous metastases in about 35%, whereas in the remaining patients metastases develop later [2, 4, 8]. Approximately 40–50% of patients after potentially successful resections die within 5 years, most frequently due to metastases to the liver. Only a small percentage of patients with metastatic livers, who have undergone resection, benefit with respect to a long-term perspective [7].

AIM

The aim of this paper was to present a case of mechanical ileus caused by a synchronous colorectal cancer.

MATERIALS AND METHODS

This report is based on the case of an 81-year old patient operated on employing an emergency procedure due to symptomatic intestinal obstruction. During the procedure, the amputation of the rectum by Miles' technique was performed. A preternatural anus was formed and a right hemicolectomy was performed due to neoplastic foci detected in the rectum and hepatic flexure. This operation was performed under general anesthesia.

CASE STUDY

A patient reported to the Emergency Department in the afternoon due to typical symptoms of intestinal obstruction – intense blunt abdominal pain lasting for 2 weeks, located mainly in the hypogastrium, intensifying with each day, intense abdominal distension, loss of weight (about 5 kg), loss of appetite, diarrhea in the last few days, retention of gases, and constipation lasting for a few days. During the physical examination, a significant distention of the abdomen above chest level, rigid abdomen, palpable pain in the hypogastrium and high-pitched tinkles were detected. X-ray of the abdominal cavity taken in the erect position indicated the presence of multiple gas-fluid levels – an image typical of intestinal obstruction (Fig. 1).



Fig. 1. X-ray showing the patient's abdominal cavity

Rectal examination revealed a large solid rectal tumor. Moreover, the patient's medical history involved prostate surgery and left inguinal hernia surgery, and he also reported two comorbidities: arterial hypertension and glaucoma.

The patient was informed concerning the diagnosis of mechanical ileus and offered admittance to General Surgery Teaching Hospital to undergo surgical treatment, to which he consented.

Next, the patient was informed about the rectal tumor as a most likely cause of the obstruction and about the necessity of its surgical management, with a possibility

of forming a preternatural anus. The patient provided a written informed consent to the suggested treatment.

During the operation, the rectal tumor detected earlier during rectal examination was discovered, measuring about 6.5 cm, located about 4–5 cm from the anus. Miles' technique was used to remove it. Then, during a routine inspection of the abdominal cavity, another tumor, measuring about 3 cm, was also detected in the hepatic flexure. Hence, a right hemicolectomy with side-to-side anastomosis with the use of a linear stapler was performed.

No postsurgical complications occurred in the postoperative period. During the first days after surgery, the patient was treated intensely due to circulatory and renal insufficiency. Total parenteral nutrition was administered for 18 days. On the 26th day after surgery, the patient was discharged in a good general condition and advised to report to the Outpatient Oncology Clinic, having received the result of the histopathological test.

Scheduled histopathological tests of both tumors revealed adenocarcinoma foci – in the rectum: *Adenocarcinoma mediocriter differentiatum G2, exulcerans* and in the colon: *Adenocarcinoma partim mucinosum mediocriter differentiatum G2, exulcerans*.

RESULTS AND DISCUSSION

The phenomenon of synchronous neoplastic tumors found in humans has been known for quite some time and has been described frequently in medical literature. Lung cancer with synchronous gastric cancer has been already discussed [10]. In approximately 10% of cases involving synchronous head and neck cancer, their multiple presence has also been reported [12, 16]. Cases of synchronous rectal carcinoma and bilateral clear cell renal carcinoma have also been analyzed [19].

A similar situation has been described with reference to bile ducts [3], pancreas [11] and breasts [14], where the presence of two or more carcinomas has been detected within the same organ.

The presence of multiple neoplastic foci is also common within the rectum and colon [18]. The incidence of this condition is estimated by various authors to range from 1.02% to 12.4% [1, 5, 6, 13].

Many genetic syndromes have been also described, where intestinal cancer co-occurs with cancers involving other organs. This can be exemplified by Lynch syndrome II, where the colon cancer co-occurs synchronically or metachronically with cancers of: the uterine corpus, ovaries, breast, stomach, small intestine, liver, bile ducts, and urinary tract or with lymphomas. Another example of such a syndrome may be illustrated by Turcot syndrome, characterized by the synchronous presence of brain tumors and colonic polyposis. These polyps can, in turn, initiate the development of colon cancer [6, 18].

CONCLUSIONS

A synchronous colorectal cancer is so common that in each case when a tumor is found in the colon or rectum, a thorough inspection of both entire organs is required.

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