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ADENOCARCINOMA OF THE SMALL INTESTINE AS THE CAUSE OF AN ACUTE ABDOMEN – TWO CASE REPORTS WITH A REVIEW OF THE LITERATURE

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TWO CASE REPORTS

Case 1

A male patient aged 47 admitted at the emergency surgery department presenting an acute abdomen. Clinical presentation and laboratory test results indicated a perforated appendix. Medical history revealed discomfort lasting several months, colelythiasis was verified following a gastrointestinal examination and cholecystectomy performed 2 weeks before the present admission. Discomfort persisted. Surgery was performed after an urgent pre-operative preparation. Intraoperative verification of tumorous changes to the ileum approximately 40 centimetres from the valvula with perforations on the antimesenteric side of the small intestine and signs of peritonitis. A resection of the small intestine with the tumorous changes and a T-T anastomosis were performed. The patient had a regular post-operative course and was discharged to home care 15 days after surgery.

Histopathological finding: Adenocarcinoma intestine tenui cum meta lymphonodorum.

The patient received oncology treatment parallel to regular surgery follow-up. Exitus occurred three years after surgery due to disease dissemination.

Case 2

A female patient aged 78 admitted presenting an acute abdomen. Radiography showed an air sickle sign below the diaphragm. In the last 6 months intermittent pain in the epigastrium. Weight loss of 8 kilograms over the preceding two months. Gastrointestinal examination and tests did not indicate an ulcus. Urgent laparotomy led to the discovery of a perforated tumour of the proximal jejunum with a diffuse fibrinopurulent peritonitis. Post-operative complications occurred due to comorbidity and general poor status. On the fifteenth day exitus occurred due to cardiac arrest.

PHD: Adenocarcinoma intestinije juni cum meta lymphonodorum.

DISCUSSION

Primary tumours of the small intestine are a rare type of tumour, the incidence of which, as epidemiologic reports show, has been growing in the past couple of decades (Haselkorn et al. 2005). Global incidence is below one sufferer per 100 000 population, occurring more often in males in highly developed countries (Vagholkar et al. 2009).

More than 40 different histologic types of small intestine tumours have been described. The most frequent are adenocarcinomas (Schottenfeld et al. 2009), followed by carcinoids, lymphomas and sarcomas (Qubaiah et al. 2010). Diagnosing this disease is a challenge because of rare localisation of such tumours, with a wide variety of clinical presentations. As a result, these tumours are diagnosed late, limiting treatment options. Although the small intestine occupies 75% of the length of the entire gastrointestinal system and 90% of its absorptive surface area, tumours of the small intestine are less frequent than the other gastrointestinal tumours, mainly colorectal carcinoma (Haselkorn et al. 2005).

Aetiologically, adenocarcinoma of the small intestine are linked with genetic factors. The group at risk comprises persons with a family history of familial adenomatous polyposis of the intestine and hereditary nonpolyposis colorectal cancer (Aparicio et al. 2014, Babba et al. 2010). Another group at risk are those who suffer from coeliac disease (Richir et al. 2010) Peutz-Jeghers syndrome (Chaaya et al. 2012), Crohn disease (Feldstein et al. 2008), Gardner and Lynch syndrome (Sun et al. 2016).

A detailed histopathological processing of the removed parts of the small intestine of our two patients did not show the above aetiological factors which could give rise to the small intestine adenocarcinoma.

Literature data indicate that small intestine adenocarcinoma most frequently occur between the 6th and the 8th decade, although there are more and more reports of occurrence in earlier age (Bilimoria et al. 2009).

In terms of local distribution, the most frequent location of small intestine adenocarcinoma is the duodenum, followed by the jejunum, and the ileum (Abrahams et al. 2002).

Clinical presentation of small intestine tumours is non-specific and laboratory parameters are completely normal until the latter stages. Evidence of this are the laboratory results of the two reported patients whose results, apart from increased inflammation parameters, were normal.

The condition most often presents with non-specific symptoms which include abdominal pain, nausea, vomiting and loss of body weight, resulting in over 50% of small intestine carcinoma being diagnosed during urgent surgery procedures (Negoi et al. 2015).

Such lack of early and specific signals and symptoms contributes to late diagnosis, which is significant for the treatment of small intestine adenocarcinoma. Literature shows an average delay in diagnosis of 8 to 12 months (Maglinte et al. 1991). In our reported cases, the first symptoms appeared around 3-4 months before surgical treatment, while no pre-operative diagnosis was made despite diagnostic processing. Possible reason is that physicians probably do not consider small intestine adenocarcinoma in their differential diagnoses.

Methods used in diagnosing small intestine adenocarcinoma include abdominal x-ray imaging without contrast, MSCT and abdominal MR, which offer high probability of diagnosing the condition (Anzidei et al. 2011). More recently capsule endoscopy has gained importance (Eliakim et al. 2010). In patients presenting symptoms of small intestine tumours, capsule endoscopy should be the diagnostic method of first choice as it differs from others in that it allows the detection of smaller lesions and their more accurate localisation (Van de Bruaene et al. 2015, Rondonotti et al. 2017).

The main treatment method is surgical resection of the small intestine. Segmental resection with 5 cm margins and complete extirpation of the segment's lymph nodes are recommended, followed by post-operative chemotherapy (Agrawal et al. 2007). Research into adjuvant chemotherapy or radiotherapy after a full resection of adenocarcinoma of the small intestine has not indicated any significant improvement in survival rates. Even though an analysis by Cochran in 2007 indicated that there were insufficient data and studies to analyse the effectiveness of adjuvant chemotherapy, same is still recommended for patients with positive lymph nodes on the basis of clinical experiences and clinical research of patients with colon cancer (Singhal et al. 2007).

Systemic chemotherapy for advanced-stage or metastatic adenocarcinoma of the small intestine is based on the treatment principles for metastatic colorectal carcinoma.

Patients with adenocarcinoma of the small intestine face a poor prognosis with a total 5-year survival rate standing at 14-33%. Performing a curative surgical resection improves survival prospects (Overman et al. 2008).

CONCLUSIONS

By reporting on the above two cases it is emphasised that diagnosing tumours of the small intestine is difficult due to lack of specific clinical symptoms. These are rare tumours which pose a major diagnostic challenge for clinicians. In recent times, capsule endoscopy has become the diagnostic method of choice in cases of suspected adenocarcinoma of the small intestine. The main treatment method is surgical resection, which constitutes the only potentially curative mode of treatment. No standard adjuvant chemotherapy for small intestine tumours exists. In metastatic stage, the condition is usually treated with systemic chemotherapy based on research of oncology treatment of colorectal carcinoma. An analysis of treatment efficacy in the case of such tumours is limited by the small number of patients in conducted studies.

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