Case Report
Isolated primary myeloid sarcoma of small intestine – A case report and review of the literature

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Abstract

Introduction

Myeloid sarcoma (MS) is a rare condition that is characterized by the occurrence of an extramedullary tumor consisting of immature myeloid cells – granulocytes, monocytes or both. MS of the small intestine in a nonleukemic patient is rare.

Aim

The aim of this work was to report and analyze a rare case of MS of the small intestine in a nonleukemic patient.

Case study

A 41-year-old male was admitted to hospital with symptoms of bowel obstruction. He suffered from severe abdominal pains, vomiting and constipation of a 12-h duration. He also reported a 2-week history of nausea and colic. On admission, the patient's general condition was good. He was normotensive and denied fever, weight loss, and allergy. Generalized abdominal tenderness was noted on palpation with hyperactive peristalsis, high bowel sounds and no guarding. There was no palpable lymphadenopathy. Results of laboratory tests, including white blood cell count of 7.17×10^9/L, red blood cell count of 5820×10^9/L, hemoglobin level of 171 g/L, and coagulation factors, were all normal. The patient underwent emergency laparotomy and part of his small intestine with tumor was resected.

Results and discussion

The patient underwent exploratory laparotomy which revealed nodular masses in the mesentery and in the wall of the small bowel. The diagnosis of a mechanical obstruction was confirmed. The involved part of the small bowel along with the mesentery was resected and sent for a histological examination. The histological examination of the specimen showed diffuse infiltration of a full thickness of the bowel, extending into the mesentery, by medium-sized neoplastic cells. The cells were round to oval in shape, with mild to moderate basophilic cytoplasm, predominantly agranular. The cells had a high N:C ratio, round or oval nucleus, dispersed chromatin and prominent nucleous. The infiltration contained eosinophils, including many myelocytes and metamyelocytes. Immunohistochemical staining was performed on the paraffin-embedded sections. MS was diagnosed.

Conclusions
(1) Correct, prompt diagnosis and appropriate immediate treatment are of crucial importance in nonleukemic MS. (2) If the initiation of treatment is postponed, it is highly probable that the patient will progress to acute myeloid leukemia (AML).

Keywords

Primary myeloid sarcoma; Granulocytic sarcoma; Small intestine