PICTURES IN DIGESTIVE PATHOLOGY

Gastroduodenal Burkitt's lymphoma in an immunocompetent patient

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CASE REPORT

The stomach is the most frequent site of extranodal malignant lymphomas. The most common gastric lymphomas are mucosa-associated lymphoid tissue (MALT) and diffuse large B cell lymphomas. Burkitt's lymphoma is a highly aggressive non-Hodgkin lymphoma. In the sporadic form, patients usually present with abdominal disease, with involvement of the distal ileum, cecum and mesentery. Although the true incidence of gastroduodenal Burkitt lymphoma is not yet defined, non-endemic gastroduodenal Burkitt's lymphoma is rare in non-HIV adult population. We report a case of gastroduodenal involvement by Burkitt lymphoma in an immunocompetent patient, previously healthy, who presented with persistent epigastric pain, cervical swelling, horizontal diplopia and paresthesias. Viral markers were negative. On upper endoscopy, multiple raised ulcerated nodules, some with central depression were observed on the greater curvature of the gastric body and antrum, and numerous smaller nodules were present in the second and third part of the duodenum. Gastric and duodenal biopsies showed expansion of the lamina propria by a diffuse infiltrate of neoplastic lymphoid cells of intermediate/

large size, predominantly regular nuclei with dispersed chromatin, high mitotic index and signs of apoptosis. On immunohistochemistry, tumour cells showed positive staining for CD20 and CD10. *Helicobacter pylori* infection was not detected. Induction chemotherapy with intrathecal chemotherapy was performed with improvement of neurologic and digestive symptoms.

DISCUSSION

The stomach is the most frequent site of extranodal malignant lymphomas (1-7 % of all gastric malignancies). The most common gastric lymphomas are mucosa-associated lymphoid tissue (MALT) and diffuse large B cell lymphomas (1). Burkitt's lymphoma is a highly aggressive non-Hodgkin lymphoma. In the sporadic form, patients usually present with abdominal disease, with involvement of the distal ileum, cecum and mesentery (2). Although the true incidence of gastroduodenal Burkitt lymphoma is not yet defined, non-endemic gastroduodenal Burkitt's lymphoma is rare in non-HIV adult population (3,4).

Fig. 1. Upper endoscopy. Multiple raised ulcerated nodules (2 to 3 cm in diameter), some with central depression were present at the greater curvature of the gastric body and antrum [A and B] with numerous smaller nodules in the second and third part of the duodenum [C].

We report here on a case of gastroduodenal involvement by Burkitt lymphoma in an immunocompetent patient.

A previously healthy 34-year old man presented with persistent epigastric pain, cervical swelling, horizontal diplopia and paresthesias. Examination showed cervical lymphadenopathy, epigastric pain with the remainder of physical examination being normal. Blood tests showed leukocytosis with immature cells in peripheral blood, thrombocytopenia and elevated transaminases and cholestasis. Viral markers were negative. Abdominal ultrasound showed multiple hypoechoic hepatic nodules. On upper endoscopy, multiple raised ulcerated nodules (2 to 3 cm in diameter), some with central depression were observed on the greater curvature of the gastric body and antrum (Fig. 1 A and B), and numerous smaller nodules were present in the second and third part of the duodenum (Fig. 1 C).

Gastric and duodenal biopsies showed expansion of the lamina propria by a diffuse infiltrate of neoplastic lymphoid cells of intermediate/large size, predominantly regular nuclei with dispersed chromatin, high mitotic index and signs of apoptosis (Fig. 2 A). On immunohistochemistry, tumour cells showed positive staining for CD20 and CD10 (Fig. 2 B and C). *Helicobacter pylori* infection was not detected. These morphological and immunophenotypical features were consistent with Burkitt's lymphoma.

Further evaluation revealed bone marrow, hepatic and central nervous system involvement. Induction chemotherapy was preformed with rituximab, cyclophosphamide, vincristine, prednisone, leucovorin, doxorubicin and methotrexate with intrathecal chemotherapy with improvement of neurologic and digestive symptoms.

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Fig. 2. Extensive infiltration of the duodenal lamina propria by a diffuse population of neoplastic intermediate/large lymphoid cells, presenting a high mitotic index (H&E, magnification x100 [A]). The neoplastic lymphoid cells are immunoreactive for CD10 [B] and CD20 [C] antibodies, consistent with Burkitt lymphoma (CD10 and CD20 immunostaining, original magnification x100).