

GASTRIC INVOLVEMENT IN CHILDHOOD NON-HODGKIN'S LYMPHOMA: A CASE REPORT*

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SUMMARY: Bakır T, Gümüştekin E, Bozalioğlu H, Teziç T, Özoran Y. (Department of Gastroenterology, Karadeniz Technical University Faculty of Medicine, Trabzon). Gastric involvement in childhood non-Hodgkin's lymphoma: a case report. Turk J Pediatr 33: 43-47, 1991.

A 14-year-old girl with non-Hodgkin's lymphoma involving the stomach is presented because of the rarity of the case, and the literature is reviewed in order to evaluate the management of these patients. *Key words:* gastric involvement, non-Hodgkin's lymphoma, childhood tumors.

Non-Hodgkin's lymphoma of the gastrointestinal tract in childhood mainly involves the ileocecal region of the bowel. Involvement of the stomach rarely occurs in children¹⁻⁵. In this report, a case of non-Hodgkin's lymphoma involving the stomach is described, and suggestions are made regarding the management of non-Hodgkin's lymphomas of the stomach in children.

Case Report

A fourteen-year-old girl had a history of epigastric pain and weight loss two weeks prior to presentation at the hospital. She also complained of nausea, vomiting and general malaise.

Physical examination revealed a pale, weak patient. The abdomen was slightly distended. Hepatosplenomegaly and lymphadenopathy were not detected. A movable mass, measuring 10 cm in diameter, was palpable in the epigastrium.

Laboratory examination revealed a hemoglobin of 8.9 g/dl, white blood cell count 11,200/mm³ with normal peripheral blood smear findings, and an erythrocyte sedimentation rate of 72 mm/h. Routine liver and renal function tests and bone marrow examination were normal. Lumbar puncture was not performed because there was no sign of central nervous system manifestation.

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Posterior-anterior and lateral roentgenograms of the chest were normal. Abdominal ultrasonography revealed a dilated stomach filled with fluid. The liver and spleen were not enlarged, and ascites were not detected.

Barium examination of the stomach showed a large filling defect in the antrum (Fig. 1). Gastroscope revealed a polypoid tumor with central ulceration involving the antrum and the corpus.



Fig. 1: Gastrointestinal roentgenogram shows a large-filling defect in the antrum of the stomach.

At laparotomy an infiltrative tumor arising from the posterior wall of the antrum and corpus of the stomach was detected. The tumor was firm, irregular and fixed to the pancreas and omentum majus. There were several metastatic nodules on the omentum. The liver and spleen were normal.

Extensive involvement of the stomach suggested that the disease started in this organ and had spread to adjacent organs. A palliative gastrojejunostomy was performed. Microscopic examination of the tumor showed diffuse lymphocytic lymphoma (Figs. 2a, 2b).

The LSA₂-L₂ protocol⁶ was contemplated in the immediate postoperative period, but the patient's general condition rapidly deteriorated, and she died of massive upper gastrointestinal bleeding and cardiac arrest on the fifteenth postoperative day. Permission for postmortem examination was denied.

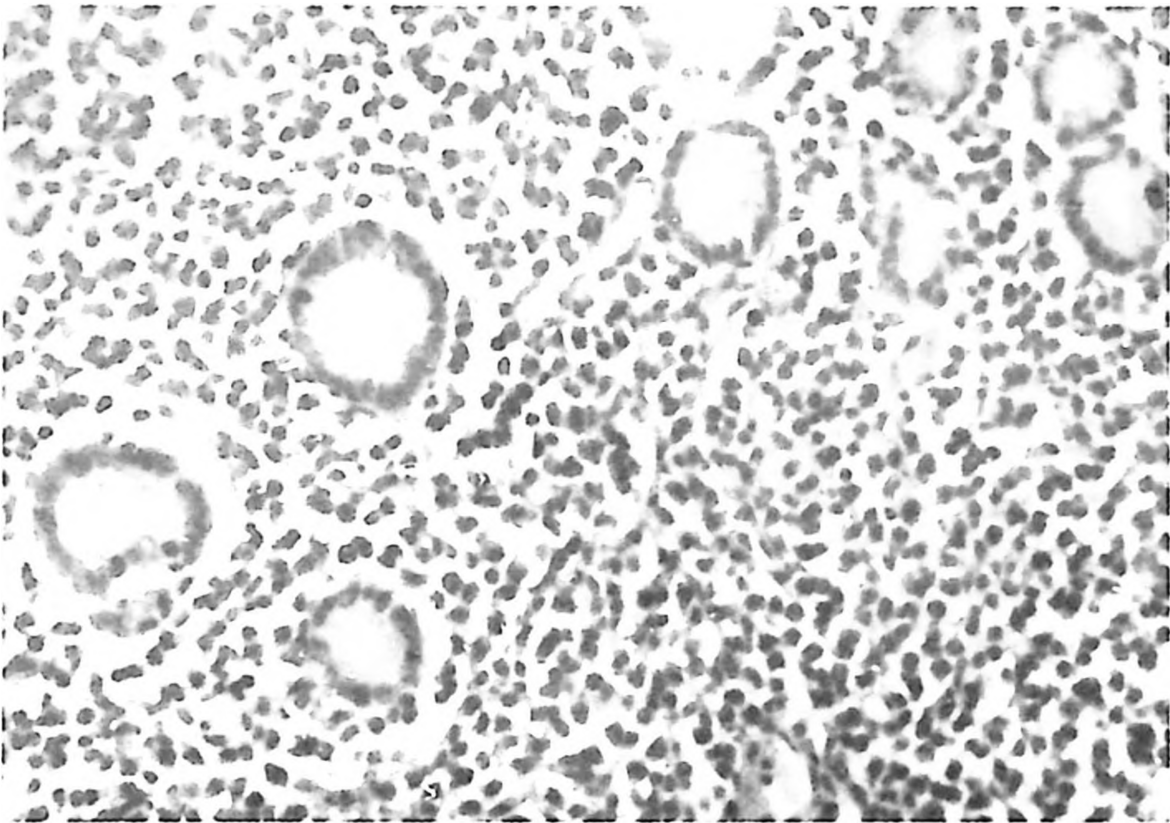


Fig. 2 a: Malignant lymphocytic cell infiltration producing atrophy and deformity in the mucosal glands. (H.E $\times$ 25).

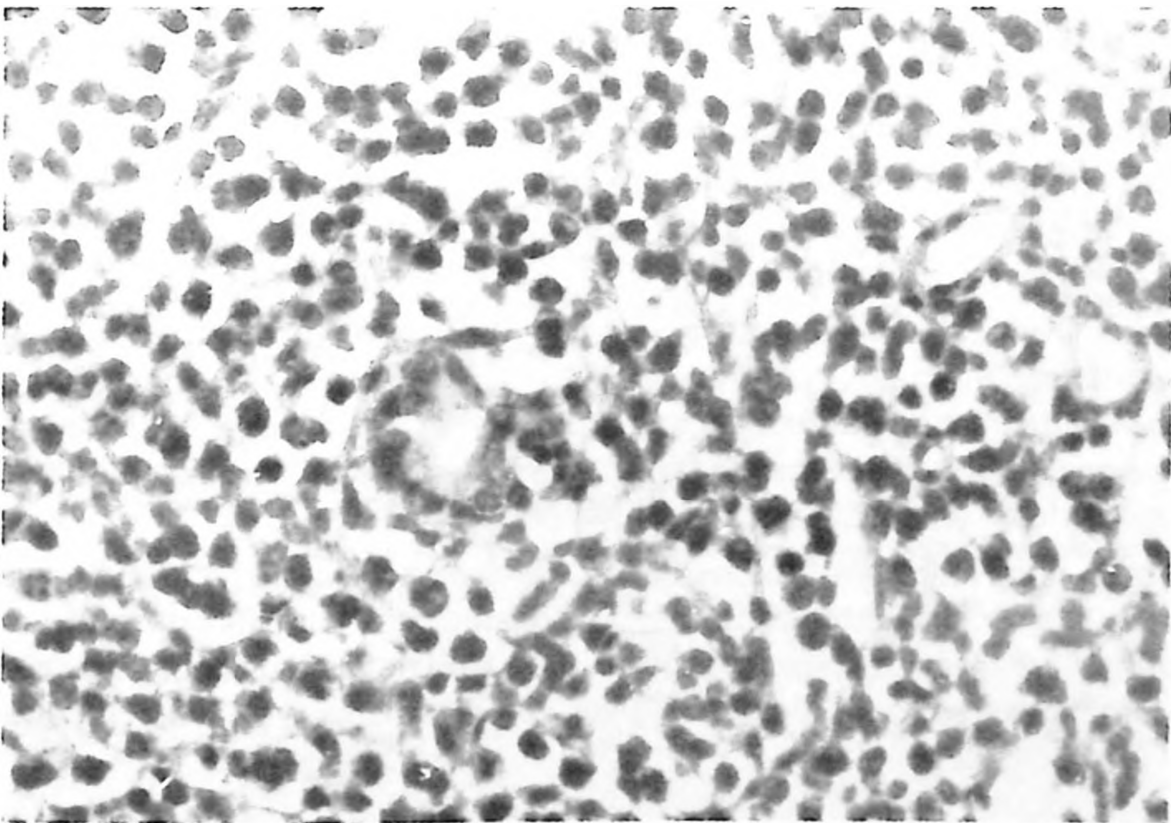


Fig. 2 b: Intensive lymphocytic lymphoma infiltration and atrophic mucosal glands. (H.E $\times$ 40).

Discussion

Malignant neoplasms of the stomach rarely occur in children. The majority of these tumors are malignant lymphomas or sarcomas. Lymphomas arise from the lymphoid tissue of the lamina propria and spread into the deep layer of the mucosa and submucosa. Gastric lymphomas are usually of the non-Hodgkin's type. Hodgkin's disease and true histiocytic lymphoma of the stomach are rarely seen in children. Virtually all childhood non-Hodgkin's lymphomas have a diffuse pattern, as nodular lymphomas are extremely rare in this age-group^{2-4,7-13}.

Grossly, these tumors have an appearance similar to stomach carcinoma. They may be polypoid, fungating or diffuse in type. Some are multicentric or simulate benign hypertrophic gastropathy with pronounced ridges and folds. Ulcers are often present and frequently multiple¹⁰⁻¹².

Clinically, patients with gastric lymphoma have late-onset, non-specific symptoms such as epigastric pain, nausea, vomiting and weight loss, which cannot be distinguished from those caused by other gastric neoplasias or peptic ulcer disease^{4,9,13}.

Barium study of the stomach reveals the gastric lesion. Endoscopic examination combined with biopsy and cytology is the best diagnostic method. Ultrasonography, computed tomography and endoscopic ultrasonography are recommended as adjunctive procedures in the evaluation of gastric lymphoma^{7,14-17}.

Despite total resection of the tumor, surgery is insufficient therapy in children with non-Hodgkin's lymphomas because they are systemic tumors with a potential for rapid dissemination from localized sites of disease. Therefore, systemic chemotherapy with or without radiation therapy should always be given. Several multi-agent drug programs have been used for systemic chemotherapy of non-Hodgkin's lymphoma in children^{4,7,9,18-20}.

The overall five-year survival rate for non-Hodgkin's lymphoma is better than that for gastric carcinomas. Penetration beyond the serosa is associated with significantly decreased survival, as is the presence of regional lymphadenopathy. The prognosis of nodular type and lymphocytic lymphomas are more favourable than the diffuse type and histiocytic lymphomas^{4,5,7,10,17}.

Ultimately, non-Hodgkin's lymphoma of the stomach should be considered a possibility in any child with symptoms of epigastric pain, vomiting, gastrointestinal bleeding, weight loss or epigastric mass. The same detailed diagnostic evaluation and appropriate treatment should be given to pediatric as well as adult patients.

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