

GASTRIC LYMPHOMA DIAGNOSED BY GASTROSCOPY AND GASTRIC BIOPSY

By W. P. Fung and S. K. Lee

INTRODUCTION

Malignant lymphoma usually presents as a generalised lymphadenopathy as first described by Hodgkin in 1832. However, in a few cases, the lymphoma may be localised to the gastrointestinal tract and its regional lymph nodes. Such cases may be called primary gastrointestinal lymphoma. The stomach alone may be involved, and cases of primary lymphoma of the stomach have been reported (Kane, 1963; Kahn, *et al*, 1972). In almost all of these cases, the diagnosis was not confirmed prior to surgery. The present report concerns a patient who had gastric lymphoma, which was confirmed by gastroscopy and gastric biopsy.

CASE HISTORY

The patient was a 19 year old Chinese male who presented with anorexia, weight loss (20 lbs.), melanic stools, and diarrhoea, for a period of 3 months. The diarrhoea was watery, without blood or mucus, and had already stopped before admission to hospital. Physical examination showed that he was very anaemic and slightly wasted. The liver was enlarged to about 4 cm. below the costal margin, and a mass was felt at the epigastrium. The liver was firm, irregular and not tender. The epigastric mass was firm and non-tender. The heart and lungs were clinically normal and there was no peripheral lymphadenopathy. The spleen was not enlarged.

Investigations revealed a haemoglobin of 7.3 gm. %; a total white cell count of 4,600/cu.mm.; a differential count of 68% polymorphs, 28% lymphocytes, 3% monocytes, and 1% eosinophils; and a platelet count of 150,000/cu.mm. Peripheral blood

film showed hypochromic, microcytic red cells, and occasional neutrophil myelocytes. The sedimentation rate was 38 mm./hour. The serum iron was 123 mcg. %. Liver function tests showed a serum bilirubin of 1.6 mg. %; serum alkaline phosphatase of 123 K.A. units; serum albumin of 3.1 gm. %; serum globulin of 2.9 gm. %; serum glutamic pyruvic transaminase (S.G.P.T.) of 550 King units.

A clinical diagnosis of gastric malignancy with bleeding was made, and a barium meal was done. The barium meal showed distortion and rigidity of the antrum with a few rounded filling defects (Fig. 1) indicating intragastric polypoidal tumours. A pentagastrin test was done and this revealed normal basal and peak acid outputs of 0.6 and 10.7 mEq./hr., respectively. The stomach was examined with the Olympus fibergastroscope and numerous small rounded tumours were seen on the mucosa of the gastric antrum (Fig. 2). These tumours were smooth and rounded and in between them were numerous small yellowish ulcers (Fig. 3). Biopsies of these lesions were taken and the histological sections showed dense accumulations of lymphocytes, well demarcated from the normal gastric mucosa (Figs. 4a and 4b). The lymphocytes showed abnormal mitosis and were thus indicative of a lymphoma. There was no evidence of bleeding or other lesions in the stomach. A diagnosis of gastric lymphoma was made. As he had severe anaemia a bone biopsy from the iliac crest was done. This revealed that the marrow spaces were infiltrated by sheets of abnormal small round cells (Fig. 5), a picture diagnostic of malignant lymphoma. Lymph node biopsy was not done as none of the lymph nodes were clinically palpable. He was treated as a case of malignant lymphoma with prednisolone and cyclophosphamide. There was good clinical improvement initially, but he developed evidence of meningitis later. In spite of vigorous treatment he deteriorated and finally died 70 days after admission. Consent for autopsy was not obtained.

DISCUSSION

Malignant lymphoma localised to the stomach, without involving the peripheral lymph nodes, is a rare entity. Primary lymphoma of the stomach has been reported by Taylor, 1939; Smith *et al*, 1958; Friedman, 1959; Kane, 1963; Welborn *et al*, 1965; Salmela *et al*, 1967; Nagvi *et al*, 1969 and Kahn

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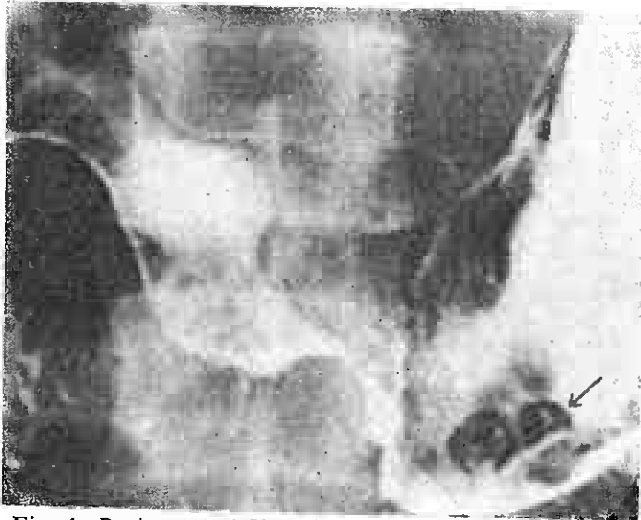


Fig. 1. Barium meal film of the stomach showing multiple rounded filling defects (arrowed) on the greater curve side of the antrum.

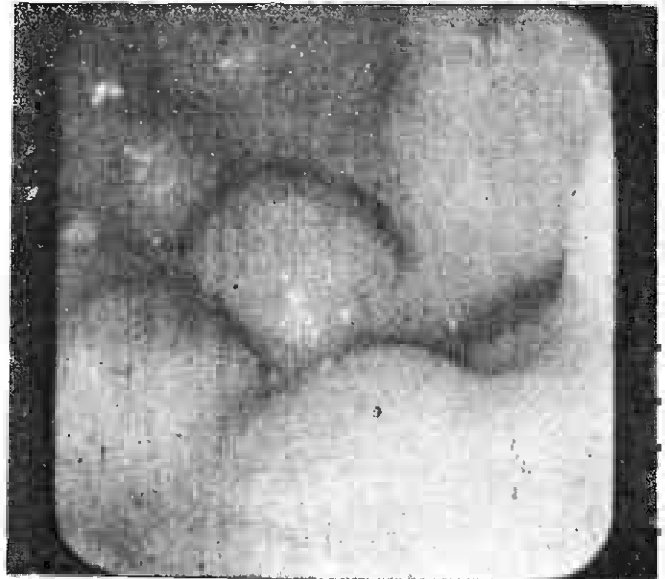


Fig. 2. Endoscopic view of the stomach showing multiple rounded tumours on the antral wall. Note the tumours were rounded, smooth and discrete.

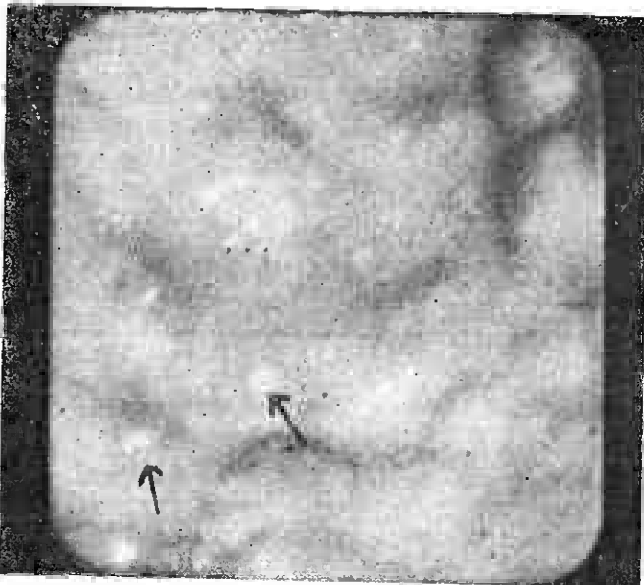


Fig. 3. Endoscopic view of the stomach mucosa showing multiple rounded tumours of various sizes and small ulcerated areas (arrows) in between the tumours. Biopsies were taken directly over the tumour and the ulcerated areas.

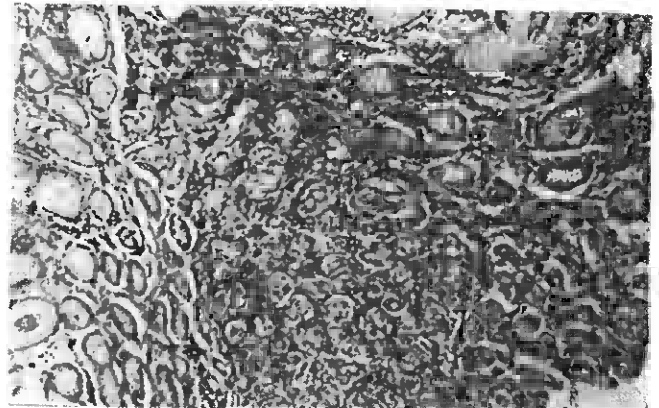


Fig. 4 (a). Histological section of the gastric biopsy showing marked infiltration of the lamina propria by lymphomatous cells, with preservation of the epithelial components of the gastric mucosa. Note the infiltrated area is fairly well demarcated from the rest of the gastric mucosa. (H. & E. $\times 75$).



Fig. 4 (b). High power view of the histological section of the gastric biopsy (Fig. 4a) showing marked infiltration of lymphomatous cells around the gastric glands. (H. & E. $\times 300$).

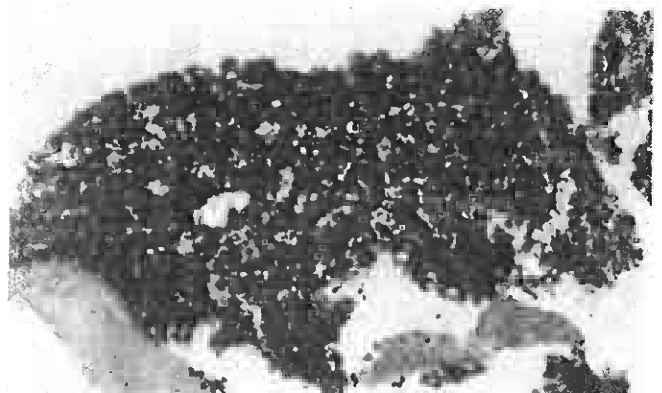


Fig. 5. Histological section of bone biopsy, showing infiltration of the marrow spaces by sheets of lymphomatous cells, a picture consistent with malignant lymphoma. (H. & E. $\times 150$).

et al, 1972. In the series of Kahn *et al*, 1972, out of 57 cases of gastrointestinal lymphoma, 19 were primarily in the stomach. Their ages ranged from 23 to 77 years, with a mean of 54, and the sex ratio was 2 males to 1 female. The present case was a Chinese male of only 19 years old. According to Kahn's series, the commonest presentation was abdominal pain, followed by weight loss. Haematemesis, dyspepsia and a palpable mass were infrequent findings. The present case was thus an unusual one, being younger in age than Kahn's series, and presenting with diarrhoea, melaena, and weight loss.

The most common abnormality in the barium meal has been reported to be a filling defect (Kahn *et al*, 1972). In the present case, there were multiple rounded filling defects in the barium meal (Fig. 1). The differential diagnosis would thus be between gastric carcinoma and gastric lymphoma. The age alone does not enable differentiation, since gastric carcinoma has been reported to occur in subjects as young as 17 years (Fung *et al*, 1972). The radiological findings of a filling defect or defects is of course non-specific. The differentiation between gastric lymphoma and gastric carcinoma is most important, since the two diseases have quite different prognoses and therapy. Gastric carcinoma requires surgery and the prognosis, in advanced cases, is very poor indeed. On the other hand, gastric lymphoma has a 5 year survival of about 29% (Kahn *et al*, 1972); and the therapy includes antimitotic drugs like cyclophosphamide. In the past, most, if not all, of the cases have been diagnosed largely on the histology of the resected stomach. In the present case, the diagnosis was confirmed by the gastric biopsy (Fig. 4) obtained through a fibergastroscope. This fully confirms the usefulness of gastroscopy and biopsy in the diagnosis of gastric lymphoma. It is concluded

that gastric lymphoma may be confirmed by gastroscopy and gastric biopsy, and that such endoscopic examination should be done in all cases who have a filling defect or defects in the barium meal.

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