

A Case of the Inflammatory Fibroid Polyp of the Stomach

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Inflammatory fibroid polyps are polypoid lesions of the stomach, characterized histologically by a proliferation of fibrous tissue forming whorling patterns around the blood vessels and infiltration of lymphocytes and eosinophils.¹⁾

This lesion has been described under such diverse names as: gastric submucosal granuloma with eosinophilic infiltration, eosinophilic granuloma, granuloma with eosinophils, inflammatory pseudotumor.²⁾⁻⁷⁾ Those who regarded the lesion as of neoplastic nature termed it fibroma, neurofibroma, Schwannoma, hemangiopericytoma, and hemangioendothelioma.^{2),5),8)} However, the most widely accepted term is the inflammatory fibroid polyp which was first suggested by Helwig and Rainer in 1953.¹⁾

Symptoms and signs include epigastric pain, nausea, vomiting and hematoemesis, but none is specific or constant. Solitary polyp, located most frequently on the gastric antrum, is adequately treated by local excision. This lesion may be mistaken clinically for gastric neoplasm. And even with histological examination the lesion is frequently confused with parasitic granulomas of the stomach.^{8),9)}

CASE

A 58-year-old woman was admitted, because of intermittent nausea which bore no relationship to food ingestion. She received roentgenologic examination which revealed large polypoid lesion on the gastric antrum, and the pedicle was attached to the antral wall of the lesser curvature. She was gastrectomized in January 1973, inasmuch as that lesion was suspected of malignancy. Laboratory data were as follows: total protein 6.91 g/dl, albumin 3.7 g/dl, A/G ratio 1.0, T.T.T 1.77 units, GOT 12 units, GPT 10 units, ALP 6.5 units, BUN 12.8 mg/dl, total bilirubin 0.84 mg/dl, cholesterol

192 mg/dl. Physical examinations were noncontributory. She had no episode of allergic diseases.

Pathological findings

A solitary well-defined pedunculated polypoid mass was found in the antrum. The surgical specimen was a soft, rather smoothly outlined polypoid mass which measured $3 \times 2 \times 1$ cm. The surrounding tissues were not invaded. On the apex of the polyp, there was a shallow ulceration of the mucosa. The cut surface was pale yellow and edematous. Otherwise, the stomach appeared normal grossly.

Microscopically, a surface of the polyp, except for the ulcerative area, was covered by gastric mucosa. However, the mucosa was considerably thinned. Stroma contained spindle-shaped cells having a nucleus with fine chromatin. Numerous eosinophilic leukocytes were evenly spread over the whole tissue. Infiltration of lymphocytes was also observed and lymph follicles were formed in some places. There were many capillaries and arterioles. They were surrounded by concentrically arranged collagenous fibers, exhibiting a whorling pattern. The muscularis mucosae extended up along the pedicle to the base of the polyp where it was interrupted by a proliferation of fibroblastic element. Consequently, the muscle bundles in this portion of muscularis mucosae were split and frayed and the submucosa was involved as well. The borders of the fibrous growth were rather ill-defined, and no capsule was discernible.

Silver impregnation revealed regular reticulin network. No relationship, however, was demonstrable between vessel walls and the fibroblastic cells which made up the bulk of tissue. Azan, van Gieson and Masson's trichrome stains indicated that the stromal tissue was composed of a delicate fibroblastic element with little collagen. Bodian's method for neurite and Luxol fast blue stain for myelin gave negative findings. A presence of mucin was not demonstrated with PAS and alcian blue stains.

Any parasite, fungus, bacteria or foreign body was not demonstrated in this lesion.

COMMENT

The first case of this lesion was described in 1937 by Kaijser in his publication on gastrointestinal allergies.⁹⁾ In 1949, Vanek used a term as "gastric submucosal granuloma with eosinophilic infiltration" to avoid confusion with eosinophilic granuloma in the bone and soft tissues. The polyp as he described consisted of a more or less collagenous tissue with fibroblast, blood vessels, lymphocytes and mature eosinophilic leukocytes.⁷⁾

Fibroblastic tissue had a tendency to arrange itself in whorls around the arterioles and capillaries.¹⁾ A case reported here was fully consistent with the histological criteria described above.

Although the term of inflammatory fibroid polyp clearly indicates the lesion is not a neoplasm, it remains open to question. Goldman considered that the lesion is a gastric analogue of appendiceal neural hyperplasia (appendiceal neuroma) and demonstrated abundant neurites within the lesion.¹⁰⁾ Some other authors stated that a neurogenous origin was unlikely for reasons that (1) the proliferating cells were arranged about small blood vessels, (2) nerve fibers were absent, (3) axis cylinders were lacking in Bodian's preparation, (4) the lesion appears to have developed through splitting and fraying rather than pushing aside of the muscle bundle of muscularis mucosae by fibroblastic elements and the lesion merges to the lamina propria almost imperceptibly.^{1),2),4),11)} In our case, however, we recognized a characteristic whorling pattern about blood vessels and muscularis mucosae whose muscle bundles were split and frayed. In addition, no neurite could be demonstrated in Bodian's preparations. These findings are in favor of the view that this polyp is inflammatory rather than neoplastic lesion. Although the polyp has generally been considered as a submucosal lesion, it is incontestable that it has originated from within the mucosa instead of the submucosa.^{3),5)} The possibility of parasitic granuloma of the stomach has to be ruled out before the diagnosis is established, because this lesion is similar to inflammatory fibroid polyp in various points. But parasitic granuloma of the stomach is located from in the submucosa to muscle layer, and has a characteristic lamellated structure which is consisted of the central necrosis surrounded by granulation tissue and by infiltration of eosinophils.^{3),5)}

Clinical symptoms are variable, for instance, constant or intermittent epigastralgia, nausea, vomiting and weight loss are common.^{2),7),12)} Severe pain is complained, on rare occasion, when the polyp prolapses into the duodenum and causes pyloric obstruction.^{2),1)} Age of the patient ranges from the third to eighth decades, but two cases were reported in children.¹²⁾ There is no predilection in males or females. In the case of Kaijser's report the patient was sensitive to onions. However, allergic signs or symptoms are usually absent and there is no eosinophilia in peripheral blood.^{6),11)} When the diagnosis is established a simple excision of the polyp is adequate and no recurrence has been reported.²⁾

SUMMARY

A case of a rare type of gastric polyp is described in the 58-year-old

woman. No other clinical manifestation was complained except for intermittent nausea. Histologically, parasitic bodies and localized abscesses were not revealed in this lesion. And we could not find neurites by Bodian's method. Then this was typical case of inflammatory fibroid polyp in pathological findings.

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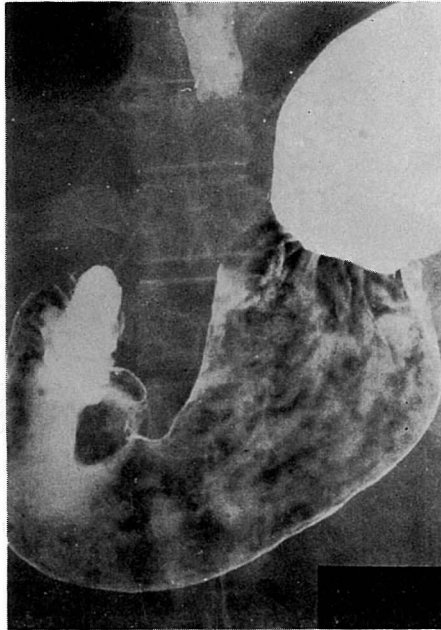


Fig. 1. Double contrast picture showing a large polypoid lesion on the lesser curvature of gastric antrum.

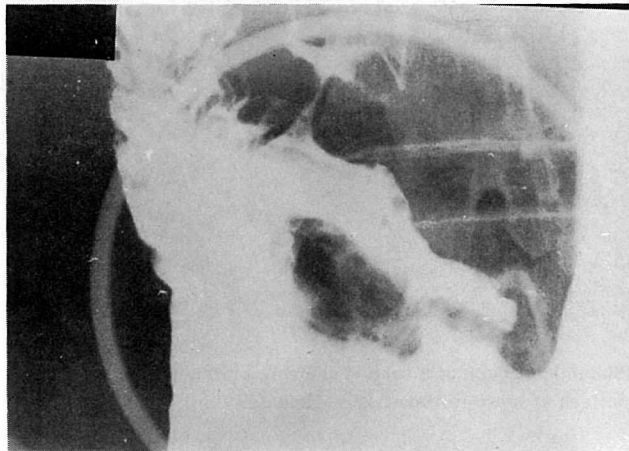


Fig. 2. A compression radiograph demonstrating a large polypoid lesion with fairly long stalk.

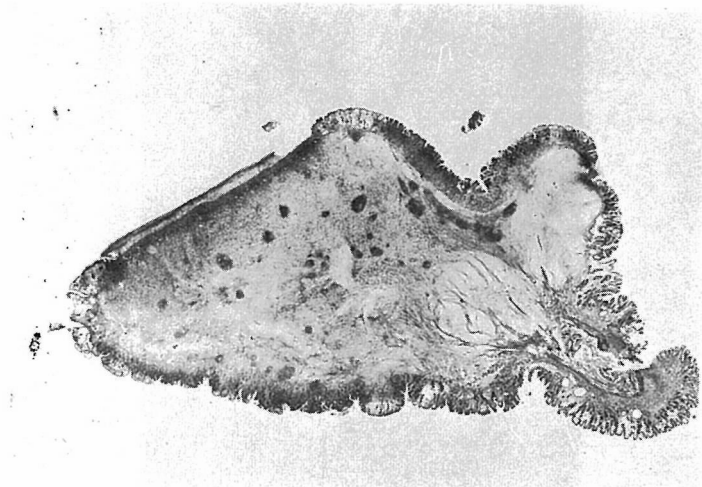


Fig. 3. A whole section of the polyp with a ulcer. Hematoxylin-Eosin $\times 4$.

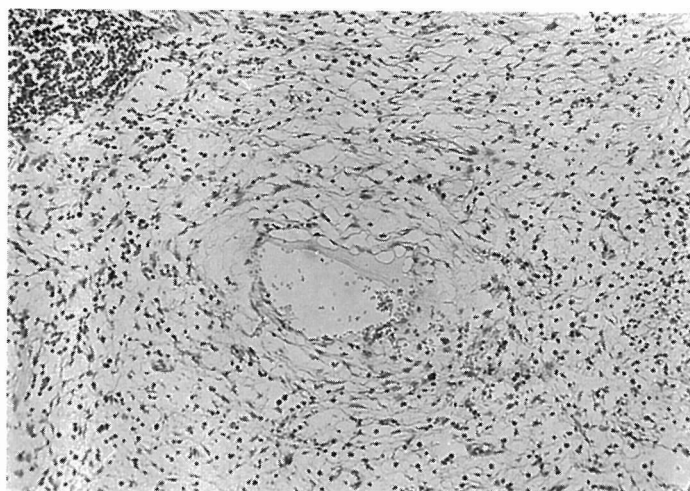


Fig. 4. Photomicrograph of a section showing a perivascular whorling pattern of loose fibrous tissue. Hematoxylin-Eosin $\times 250$.

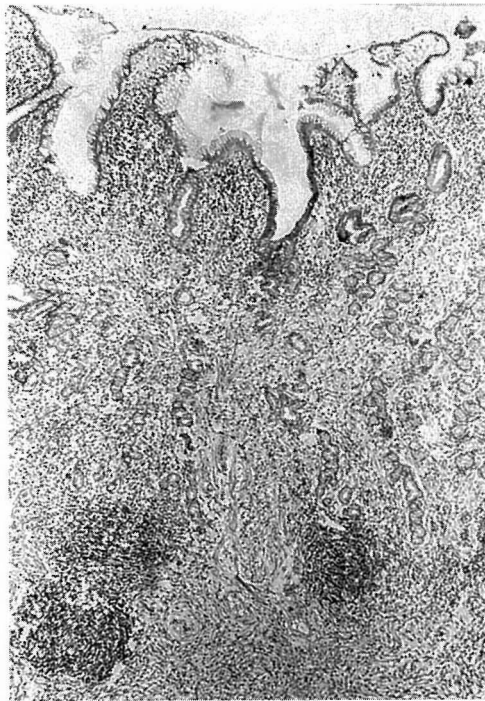


Fig. 5. In mucosa over the polyp, diminution and separation of glands. Diffuse eosinophilic infiltration and lymphoid follicles. Hematoxylin-Eosin $\times 100$.



Fig. 6. Frayed and displaced fragments of muscularis mucosae. Azan $\times 250$.