LEIOMYOBLASTOMA—A CASE REPORT*

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In an article by Woodington and Carter[1] smooth-muscle tumours of the stomach are classified as leiomyomas, leiomyosarcomas and bizarre leiomyomas or leiomyoblastomas.

This last group, defined by Stout[2] as unusual smooth-muscle-cell tumours of the stomach, have, by virtue of the confusing histology, given rise to many erroneous diagnoses.

The relative rarity of this condition, the interesting mode of presentation in this case and the importance of correct diagnosis have prompted me to publish this report.

CASE REPORT

A 59-year-old White male presented with symptoms of a long-standing anaemia of unknown origin.

On examination the patient was in incipient congestive cardiac failure with a blood pressure of 160/100 mm.Hg and a haemoglobin concentration of 5·9 G/100 ml. Other investigations revealed an erythrocyte sedimentation rate of 3 mm./hr, a white cell count of 9,000/cu.mm. and a blood urea of 25 mg./100 ml. A chest X-ray was normal and the electrocardiograph showed atrial fibrillation with non-specific T-wave flattening.

The patient was treated with digitalis and diuretics and was given a blood transfusion.

Further investigation by barium enema and sigmoidoscopy failed to show a cause of gastro-intestinal haemorrhage. Barium meal, however, revealed a duodenal mass.

At laparotomy, performed by Dr J. Terblanche, a freely mobile, polypoid gastric neoplasm, situated approximately ¾ inch from the pylorus, was found. The pylorus was widely dilated, allowing the tumour to slide through freely, resulting in the radiological appearance of a duodenal mass.

A polypectomy, including a surrounding rim of stomach, was performed. The patient made an uneventful recovery and was discharged symptom free.

Pathology

Macroscopically the tumour consisted of a main muscular mass capped by oedematous polypoid excrescences (Fig. 1).

Microscopically the polypoid excrescences consisted of intestinal-type epithelium complete with Brünner's glands. The main lesion consisted of very vascular tissue with a solid background of striking polygonal cells with a perinuclear clear zone.

This was an example of the rare, benign gastric neoplasm known as a leiomyoblastoma.

DISCUSSION

Stout[2] in 1962 reviewed a series of 69 bizarre smooth-muscle tumours of the stomach previously diagnosed as being of mesenchymal, vascular, epithelial or miscellaneous origin. This study led him to conclude that these tumours possessed certain characteristic histological features, e.g. rounded cells with mildly acidophilic cytoplasm, no myofibrils and a perinuclear clear zone. He suggested the name leiomyoblastomas. Martin *et al.*[3] consider the perinuclear clear zone as being diagnostic of these tumours.

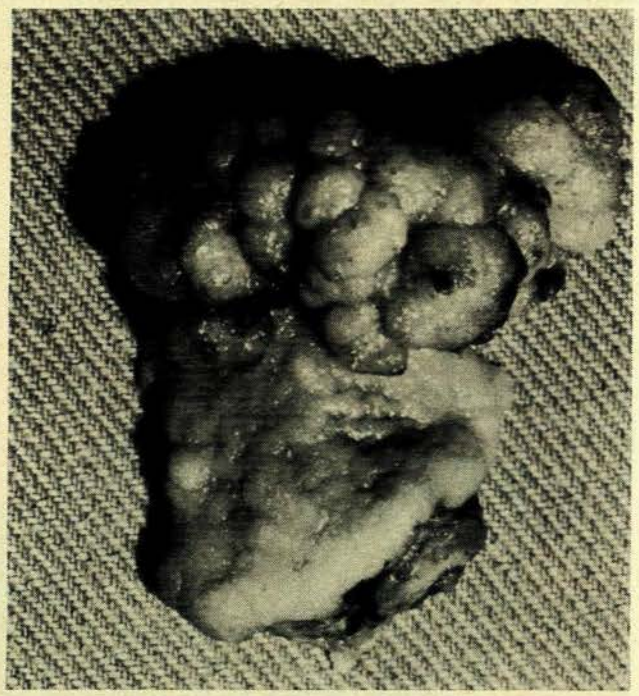

Fig. 1. See text.

While being sharply circumscribed macroscopically, these tumours often exhibit microscopical infiltration. Microscopical infiltration does not correlate with the tremendous variance encountered in tumour size.

The majority of these tumours occur as intramural neoplasms in the age-group 50 years and over, but they may, in rare instances, occur in childhood.

It has been observed that males are almost twice as commonly affected as females. In this regard Woodington and Carter[1] refer to the similarity in sex incidence between these tumours, gastric ulcers and gastric carcinomas.

Histologically comparable tumours have been found in the intestine and uterus but not in the skin, retroperitoneal tissues, mediastinum, lung, bladder or prostate. Herrington[4] in this regard stressed the relatively rare occurrence of leiomyoblastomas in the uterus and intestine compared with the frequency with which leiomyomas occur in these situations.

The mode of presentation varied tremendously and depended primarily on the size and location of the tumour mass. Thus these lesions may be noted as incidental findings, or they may give rise to dyspeptic symptoms, vague abdominal pains unrelated to meals, symptoms of gastro-intestinal haemorrhage, pyloric obstruction and increased abdominal girth.[5-7]

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The importance of a correct histological diagnosis has to be stressed because, whereas the majority of these tumours are benign, they possess a malignant potential which is not often displayed.

In the series described by Stout[2] 2 cases out of the 69 reported were malignant, whereas 1 case out of the 6 reported by Martin *et al.*[3] turned out to be malignant. According to Stout[2] a feature of malignancy in these tumours is an increased mitotic rate in 50 random high-power fields. Kay[8] adds an increase in cellularity and nuclear pleomorphism as further criteria of malignancy.

Notwithstanding the fact that leiomyoblastomas have a very low malignant potential, it is of the utmost importance to ascertain the correct diagnosis and likelihood of malignancy in each tumour, as this will significantly influence the extent of surgical removal and postsurgical therapy.

SUMMARY

A case of a gastric leiomyoblastoma is presented together with a review of the literature, stressing the importance of correct diagnosis.

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