Gastric Leiomyoma Presenting with Massive Hematemesis in a Nigerian

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ABSTRACT

Our resource-limited environment notwithstanding, extensive scientific work has been published about the causes of upper gastrointestinal bleeding in our locality. Interestingly however, gastric leiomyoma is most uncommonly mentioned as one of the findings in these publications. This paper, therefore, seeks to document gastric leiomyoma as a rare cause of bleeding in our environment and highlight the need for deployment of appropriate radiology and endoscopy techniques in diagnosing upper gastrointestinal bleeds.

Key words: Endoscopy; gastric leiomyoma; Nigeria

Introduction

Gastric leiomyomas (GL) are rare tumors of the stomach which are usually asymptomatic but can account for bleeding and other complications such as obstruction.[1] Attention to its role in the causation of gastrointestinal symptoms and signs is low among radiologists and clinicians as it is only rarely espoused as a cause of significant clinical complaints in this environment.[2] The case report here seeks to document a case of GL and highlight pertinent clinical, diagnostic, and therapeutic aspects.

Case Report

A 71-year-old man presented at the emergency unit with complaints of dizziness and fading consciousness. He had noticed sudden onset vomiting of large quantities of blood and blood-stained effluents, a few hours before presentation. The patient was noted to be somewhat confused and markedly pale. An emergent packed cell volume was 13% and the patient was hemodynamically stabilized with measures including an urgent blood transfusion.

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The patient is a known hypertensive and had only recently been placed on aspirin. His stay in the hospital was subsequently uneventful and he declined pleas for a gastroscopy at the time. Upon further persuasion during his follow-up clinic about 4 weeks later, the patient presented for gastroscopy which revealed a sessile 20 mm by 15 mm mass with a smooth surface and a small, healed ulcer lying on its surface. The ulcer is surrounded by a patch of mild erythema [Figure 1].

The computed tomography (CT) scan revealed a well-defined, homogenously enhancing, and soft-tissue lesion seen in the pyloro-antral region. It measures about 2 cm by 2 cm. Abnormal perigastric fat stranding and nodes were not seen [Figure 2]. Histology of the biopsy sample revealed chronic *Helicobacter pylori* gastritis.

Discussion

GL are well-circumscribed, nonencapsulated, submucosal mesenchymal tissue lesions that may arise from any smooth muscle component of the muscular layer of the stomach

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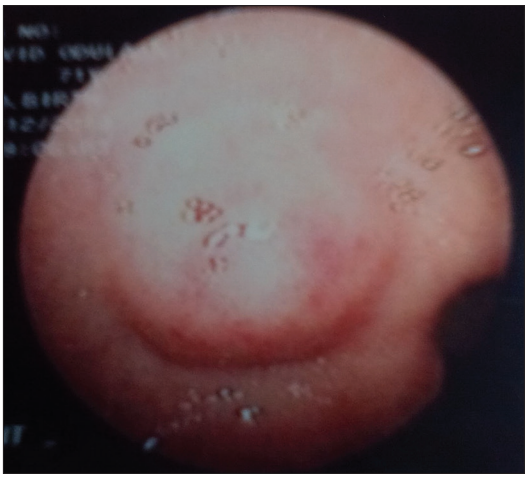

Figure 1: Endoscopic view showing the lesion in the prepyloric region

Figure 2: Contrast-enhanced computed tomography image showing the 2 cm by 2 cm mass in the pyloro-antral region (long arrows)

wall.[1] They are rare and only represent 2% of all gastric neoplasms.[3]

Most GLs are located in the upper half of the stomach, but it can occur anywhere else.[2,4] The lesion described here was located in the pyloro-antral region. They are usually submucosal lesions originating from the muscularis propria or muscularis mucosa and presenting as endogastric lesions; exogastric leiomyomas originate from the serosa. The size of the tumor is usually smaller than 5 cm.[5] Pathologically, most of these tumors are composed of spindle cells and display smooth muscle differentiation.[6]

Clinically, most GLs are asymptomatic.[1] However, gastrointestinal bleeding is a major sign by which these lesions are brought to medical attention-when their surfaces become ulcerated (induced for instance by medications), they may bleed.[1,7] They must, therefore, be considered as a cause for clinically significant bleeds.[2,4] The suspicion in our patient's case was that the recent introduction of aspirin is what probably provoked the episode of bleeding.

Endoscopically, GLs appear as submucosal lesions, but invariably endoscopic biopsies are not deep enough to be of any diagnostic value.[8] Currently, radiological diagnostic criteria for GLs have been well-identified.[9] On CT scans, GLs appear as solid round or ovoid low attenuation mass lesions of uniform density with well-delineated smooth borders.[9] Our patient's case well illustrates this as the biopsy samples were reported as chronic severely active *H. pylori* gastritis and no morphologically distinguishable sign of GL was noted. But, the diagnosis was made on the strength of clinical, endoscopic, and radiologic findings.

Differential diagnosis for similar lesions would include all submucosal mesenchymal tumors. They are gastrointestinal stromal tumors (GISTs), schwannomas, and lipomas. The latter is quickly ruled out as the distinct characteristics of such lesion on CT scan - A well-circumscribed mass with uniform fat attenuation was absent. Small GISTs are more likely to present with the intact overlying mucosa enhancing to a greater degree than the mass itself. Although schwannomas and small GISTs show similar imaging findings, the latter more frequently show an exophytic or mixed growth pattern, homogeneous enhancement pattern, and perilesional lymph node enlargements.

The etiology of GLs is not known, but extensive work has been done on its tumorigenesis.[6] An interesting finding has been documented in the literature of a possible association with *H. pylori* infection,[8] the histology of endoscopic biopsy from the index case presented here is also suggestive. The possible etiology and association is worth further research and elucidation.

Asymptomatic lesions are best left alone and followed up but intervention is required for symptomatic GL. Many modalities are available and range from endoscopic procedures for small submucosal lesions to exploratory laparotomies for very large ones.[10] As the patient had remained symptom free for months and was an elderly patient in stable clinical condition, the decision was made not to intervene but continue close monitoring and advice against use of nonsteroidal anti-inflammatory drugs and other potentially provocative medications.

Conclusion

The case is presented to highlight a very rare cause of gastrointestinal bleeding in Nigeria-apart from a series done about three decades ago by Osime *et al.*,[2] the authors are unaware of any mention of the unique lesion in reports from our locality. The other point to this paper is to underline the value of appropriate radiology tests and prompt endoscopic evaluation of all case of such bleeding even in a resource-limited environment such as ours.

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Conflicts of interest
There are no conflicts of interest.

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