Abstract

Introduction

Signet ring cell carcinoma of the esophagogastric junction is rarely reported in the literature. Also, Barrett’s esophagus is uncommonly reported among black populations of the Sub-Saharan region in Africa. The aim of this article is to present an interesting case of both Barrett’s esophagus and signet ring cell carcinoma of the esophagogastric junction the lesions in an African (Nigerian) patient. The two coexistent lesions in the same individual were present along with advanced cancer of the gastric antrum. The appearance of these pathologies might well be linked to common etiopathogenetic mechanisms.

Case report

An 84-year-old Nigerian lady presented with epigastric pain and repeated vomiting. Esophagogastroduodenoscopy revealed a small ulcer at the level of the esophagogastric junction (EGJ) along with an ultra short Barrett’s segment. The gastric antrum had extensive architectural distortion from the presence of a large fungating, ulcerated mass. Biopsies of the ulcer at the EGJ revealed signet ring carcinoma and this was the same histopathological finding in the biopsy sample from the gastric antrum. Additionally, the pathologists’ report on the biopsy at the level of the EGJ confirmed the clinical assessment of Barrett’s. The patient however refused further consultation, evaluation and therapy.

Conclusion

This common entities of signet ring carcinoma of the EGJ and Barrett’s esophageal lesion in a Nigerian. The coexistence of these lesions along with advanced cancer of the same subtype in the antrum is suggested to be linked.

Endoscopy revealed an ultrashort segment of Barrett’s esophagus (Figure 1) at the esophagogastric junction (EGJ) with a small ulcer with heaped up edges at the EGD. The lining of the stomach was moderately inflamed with collections of food debris mixed which was significant as her last meal was more than 12 hours prior to the procedure.

Discussion

Barrett’s esophagus (BE) is defined as the condition in which intestinal metaplastic epithelium replaces the normal stratified squamous epithelium of the esophagus6. Traditionally, based on the endoscopic findings, BE is...
divided based on the length of the observed columnar epithelium into long segment (for lesions ≥ 3 cm in length), short segment (for lesions < 3 cm in length) and ultra-short segment BE (for lesions< 1 cm in length). The condition is thought to be exhibit striking regional and racial variation in prevalence. It is commoner in whites than blacks and rare in black sub-Saharan populations. Local studies suggest support for this postulated rarity in the Nigerian population. But actual scientific data about precise values of the prevalence of this condition are lacking in our environment. Hence, the interest in this particular case report.

BE clearly represents an extreme end of the pathophysiologic spectrum of gastroesophageal reflux diseases (GERD). But Ball et al. had noted that owing to the relative insensitivity of the columnar mucosa to acid exposure (as compared to erosive esophagitis), there is a clinical dilemma of arriving at early diagnosis as many patients have few or no symptoms. An example of the aforementioned is the case of the elderly lady in this report who states complete absence of the usually anticipated symptoms of GERD.

Gastric cancer on the other hand is a much commoner disease. It represents at least 12% of all malignant gastrointestinal tumours in several local regional studies. Gastric carcinomas are divided (after Lauren) into intestinal and diffuse subtypes. The intestinal type adenocarcinoma is the commonest histopathologic subtype in Nigeria. The signet ring carcinoma (SRCA) which belongs to the diffuse subtype group is a markedly more aggressive form of gastric cancer and the patients tend to be diagnosed at a later stage and with worse disease in general than those with gastric adenocarcinoma. A California-based study found that SRCA were more likely to be found in women and in the distal stomach as was the case in the index report.

The coexistence of BE and SRCA in the EGJ of our patient is worthy of note. The presence of non-Barrett’s primary SRCA of the oesophagus is extremely rare. Only a handful of such have been published in literature both locally and elsewhere as most primary esophageal SRCA arise from Barrett’s esophagus.

In the case presented here, the SRCA’s relatively early infiltration of the EGJ compared with the advanced characteristics of its antral profuseness leads us to suggest that the earlier lesion represents metastatic spread from the latter site. A fascinating discourse is currently ongoing in literature as to mechanism of such esophageal metastatic lesions particularly as gastroesophageal reflux has been fingered in the etiopathogenesis of those lesions that are restricted to the mucosal layer alone.

We postulate that the occurrence of these two lesions in this patient is not coincidental. We would adduce the distortion in the normal architecture of the distal stomach is likely to have retarded gastric emptying. Delayed gastric emptying is thought to be one of

---

**Case report**

**Figure 1:** Gastroscopy picture at the esophagogastric junction showing the region of ultrashort Barrett’s segment.

**Figure 2:** Gastroscopy picture of the gastric prepyloric region showing the malignant mass with extensive architectural distortion.

---

*FOR CITATION PURPOSES:* Aderemi O, Nicholas A. A case of signet ring cell gastric cancer with spread to the esophagogastric junction coexisting with Barretts esophagus. OA Case Reports 2014 May 15;3(5):50.
the implicated predisposing factors to the development of chronic GERD, which in turn, resulted in the development of BE in our patient.

The article therefore seeks to document these interesting coexistent lesions in the same patient for the first time in our environment and suggest that the appearance of these pathologies is linked.

**Conclusion**
The rarity of the SRCA lesions at the EGJ is highlighted in this paper along with the uncommon finding of Barrett's disease in this population group. Furthermore, the coexistence of these lesions is most interesting as it represents, to the best of the authors’ knowledge, the first time that is has been documented in scientific literature. Moreover, there is suggested a link in the existence of SRCA lesions in both the antrum and EGJ. Perhaps, the direct implanted of cancerous cells from the antrum via reflux played a role in the development of similar cancer in the EGJ.

**Consent**
Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

**References**
11. Ofoegbu RO. Incidence, pattern and African variations of common benign disorders of the esophagus: experience...
Case report