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Case Report

A rare gastric and peritoneal metastasis of cervical squamous cell carcinoma: an unusual breach and homing

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ABSTRACT

Gastric metastasis is rare with a reported incidence of less than 1% with only a very few case reports in the literature to date. Gastric metastasis most commonly arises from malignant melanoma. We present a case of a 58-year-old female, a case of metastatic poorly differentiated squamous cell carcinoma of cervix. Radiology showed a circumferential asymmetric enhancing wall thickening in antrum of stomach and peritoneal carcinomatosis. Endoscopy showed circumferential thickening in proximal antrum, biopsy of stomach and peritoneum showed carcinoma-possibly poorly differentiated squamous cell carcinoma which on immunohistochemistry (IHC) was confirmed to be HPV associated poorly differentiated squamous cell carcinoma. The patient was started on palliative chemotherapy and is on follow-up.

Keywords: Squamous cell, HPV, Gastric, Metastasis, Peritoneum

INTRODUCTION

Cervical carcinoma is the fourth most common cancer worldwide which can be associated with infection by high risk human papilloma virus (HPV) infection.[1] Cervical squamous cell carcinoma usually has a tendency for lymphatic spread and local infiltration which can lead to ureteral strictures, renal failure, urosepsis and bleeding. However, cervical squamous cell carcinoma with peritoneal carcinomatosis and gastric metastasis is a relatively uncommon presentation.[2] The common primary tumour which can metastasis to stomach includes malignant melanoma, carcinoma breast, and carcinoma lung. We hereby present a case of metastatic squamous cell carcinoma cervix-metastasis to stomach and peritoneum.

CASE REPORT

A 58 year old female, a known case of poorly differentiated squamous cell carcinoma cervix presented with complaints of cough. CT-chest and abdomen showed large nodular omental thickening and diffuse nodular peritoneal thickening with peritoneal carcinomatosis. Circumferential asymmetric enhancing wall thickening in antrum of stomach was noted with focal extraserosal extension-2nd primary malignant lesion (Figure 1 and 2). A cyst in left adnexa was noted-left ovarian cyst with surface deposit/Krukenberg lesion. Moderate right pleural effusion with suspicious focal pleural thickening-Malignant pleural effusion was also present. Enlarged left axillary, bilateral external and common iliac lymphnodes-metastatic deposits. There was no obvious focal enhancing

lesion in cervix (if clinically indicated suggested MRI pelvis). There was no focal liver/bone lesion. Upper GI endoscopy showed a circumferential non friable firm thickening causing luminal obstruction in proximal antrum tuberculosis/ lymphoma/ carcinoma stomach/metastasis (Figure 3 and 4). Biopsy was done from the antral thickening, which showed gastric antral mucosa with preserved foveolar architecture and a few fragments infiltrated by a tumour arranged in few nests and singly lying cells, however the gastric mucosal epithelium appears free of tumour. Individual cells are large polygonal with moderately pleomorphic vesicular nuclei, coarse chromatin, distinct nucleoli and moderate amounts of eosinophilic cytoplasm-features are in favour of a metastatic carcinoma -possibly metastatic squamous cell carcinoma (Figure 5-7). Peritoneal biopsy was done which showed features suggestive of poorly differentiated carcinoma. IHC was done which showed diffuse strong nuclear positivity for p63, p40, p16 and membranous staining for CK7 and CK5/6 (Figure 8). Few cells showed nuclear positivity for p53. Tumour cells were negative for CK20, PAX-8, synaptophysin and CDK2-findings are consistent with involvement by HPV associated poorly differentiated squamous cell carcinoma cervix in a known carcinoma cervix. Patient is currently on palliative chemotherapy and on follow-up.

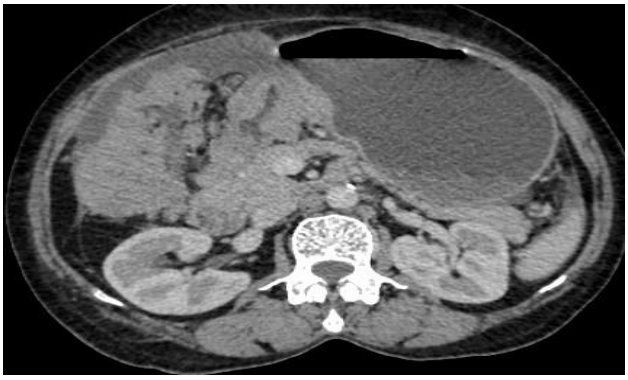

Figure 1: CT abdomen showing circumferential asymmetrical wall thickening involving the antrum of stomach.

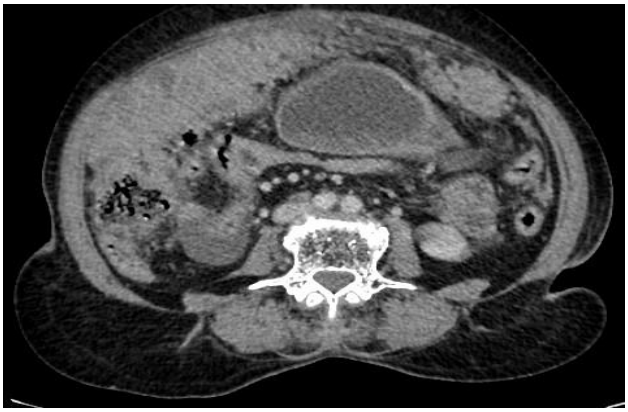

Figure 2: CT abdomen showing diffuse nodular omental and peritoneal thickening.

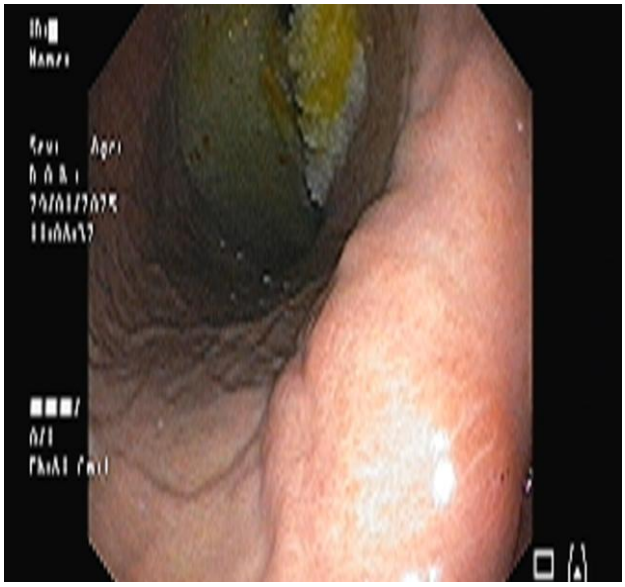

Figure 3: Upper GI endoscopy showing a nodular lesion in the gastric antrum.

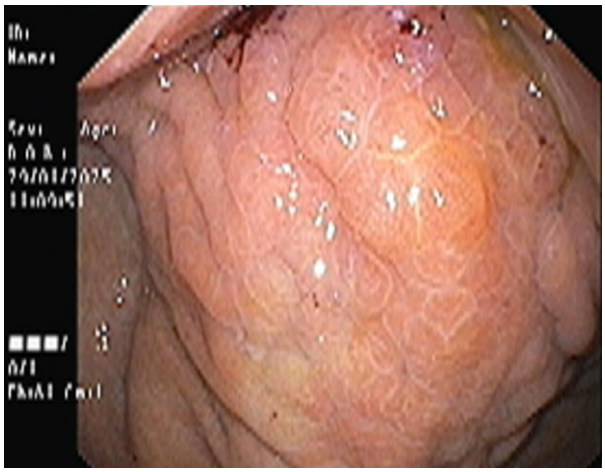

Figure 4: Upper GI endoscopy showing a nodular lesion in the gastric antrum.

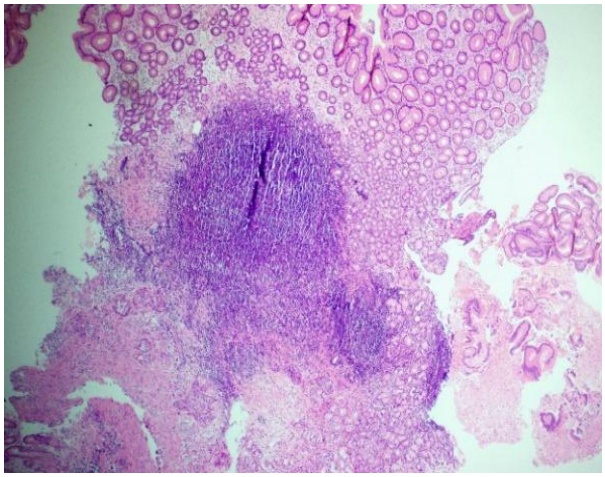

Figure 5: Gastric antral mucosa showing nests of tumour cells (H and E at 40×).

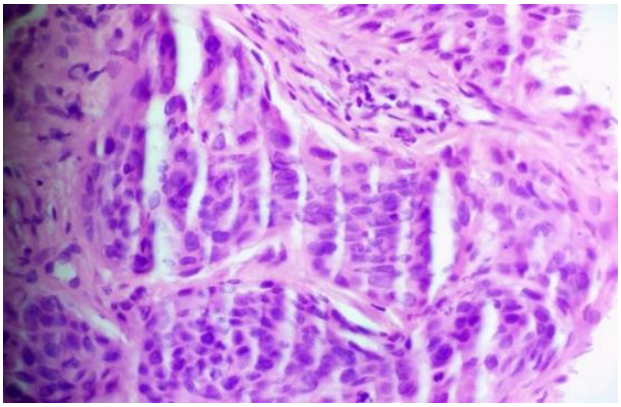

Figure 6: Gastric antral mucosa showing nests of tumour cells (H and E at 100×).

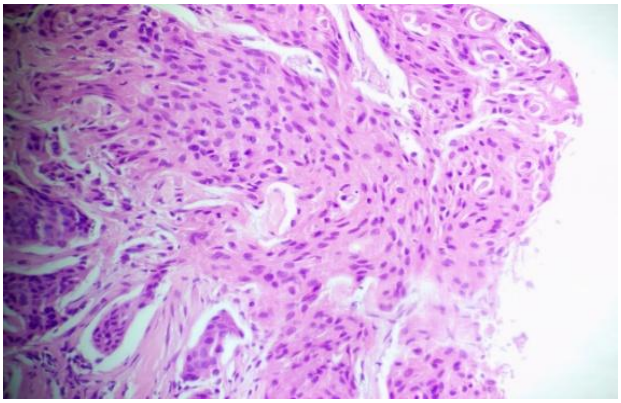

Figure 7: Gastric antral mucosa showing nests of tumour cells (H and E at 200×).

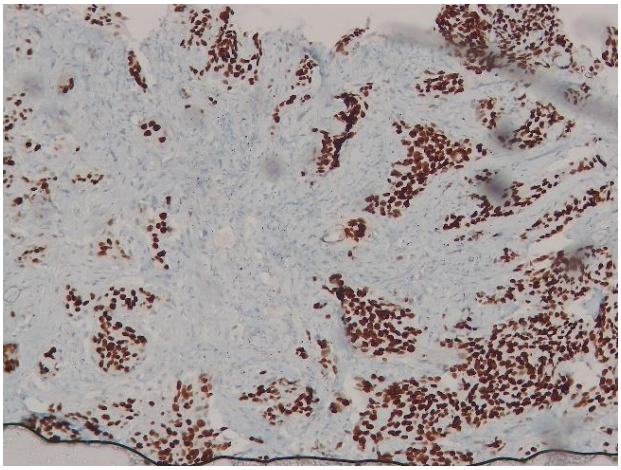

Figure 8: IHC showing diffuse strong nuclear positivity for p63 (H and E at 100×).

DISCUSSION

Cervical cancer is the fourth most common cancer in women, with around 6,60,000 new cases reported in 2022 globally. Cervical carcinoma with peritoneal carcinomatosis is rare accounting for less than 1%.[3] Cervical carcinoma has a propensity for lymphatic spread and local infiltration which can lead to ureteral strictures, renal failure, urosepsis and bleeding which can lead to mortality.[4] The various route of spread of gastric metastasis from cervical carcinoma includes peritoneal, haematogenous dissemination, spread through lymphatics and local invasion by tumor. Cervical carcinoma, in the early stages spreads through lymphatics spread through haematogenous route in an infrequent mode of spread. Most of the metastatic gastric carcinoma occurs through hematogenous spread. Peritoneal lymphatic stomata may be the main pathway for draining from the peritoneal cavity and the diaphragmatic peritoneum has the strongest absorption in all parts of the peritoneum. Therefore, the tumor cells might be absorbed into peritoneal lymphatic stomata of the diaphragm. The common primary tumour which can metastasis to stomach includes malignant melanoma (23%), carcinoma breast (15%), and carcinoma lung (9%).[5] The common patterns of metastasis to the stomach are linitis plastica, discrete nodules or external compression. Endoscopic evaluation may be normal in 50% of cases as the lesion is often limited to the submucosal and seromuscular layers of the stomach. Metastatic gastric carcinoma usually presents as solitary lesion than multiple lesions and as discrete nodules or linitis plastica. The main differential diagnosis considered was primary squamous cell carcinoma of stomach though it is rare. Primary gastric squamous cell carcinoma, gastric adenosquamous cell carcinoma or oesophageal squamous cell carcinoma with gastric extension are the possibilities to be considered in case of a squamous cell carcinoma of stomach. Various criteria established for the diagnosis of primary squamous cell carcinoma of stomach includes Parks criteria, criteria proposed by Boswell and Helwig, etc. According to criteria by Parks et al the following parameters must be fulfilled for a diagnosis of primary squamous cell carcinoma of stomach-1) the tumor must not be located in the cardia, 2) it must not extend into the esophagus, and 3) there should be no evidence of SCC in any other organ.[6] Gastric metastasis from cervical carcinoma can sometimes lead to dreadful complications like gastric bleeding, gastric perforation, etc.[7] which can lead to mortality. Gastric metastasis can also to antral stenosis.[8] Metastatic gastric tumour has a poor prognosis with a median survival period of less than 5 months and usually amenable only to palliative treatment.[9]

CONCLUSION

Gastric metastasis from cervical carcinoma, though rare can present with nonspecific symptoms often presenting as advanced disease and carry a poor prognosis. It is important to consider the possibility of gastric metastasis as it can lead to devastating complications like perforation, bleeding, obstruction, etc. contributing to mortality of the patient. Vaccination against high risk HPV can help in preventing cervical carcinoma.

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