Acta Scientific MEDICAL SCIENCES (ISSN: 2582-0931)

Volume 7 Issue 5 May 2023

Case Report

Rare Case Report- Melanoma Stomach

Bharat Patodiya*[1], GV Rao[2], Anuradha Sekaran[3], Meenakshi Chowdhury[4], Tharni putta[5] and D Nageshwar Reddy[6]

[1]*Department of Medical Oncology, Omega Hospitals, Hyderabad, India*

[2]*Chief and Head surgical Gastroenterologist, AIG Hospitals, Hyderabad, India*

[3]*Consultant Pathologist AIG Hospitals, India*

[4]*Director Dhanvantari Implant clinic, New Delhi, India*

[5]*Consultant Radiologist, AIG Hospitals, India*

[6]*Chairman and Chief of Gastroenterology AIG Hospitals, India*

***Corresponding Author:** Bharat Patodiya, Department of Medical Oncology, Omega Hospitals, Hyderabad, India.

DOI: 10.31080/ASMS.2023.07.1552

Received: March 20, 2023

Published: April 18, 2023

Abstract

We report the case of a 50-year-old female who presented with blood-stained vomiting. Physical exam and laboratory studies was unremarkable. USG abdomen revealed thickening of walls of body of stomach with peri gastric oedema. A contrast CT scan suggestive of polypoidal endophytic growth in the distal body of stomach with left lower lobe lung 3mm deposit. Endoscopy biopsy from stomach was suggestive of poorly differentiated malignancy and immunohistochemical staining demonstrating patchy positivity CD43, CD45 and BCL-2 positivity. Whole body positron emission tomography (18-FDG-PET/CT) demonstrated metabolically active heterogeneously enhancing polypoidal soft tissue mass in the body of the stomach along the greater curvature as described - Primary. Low grade metabolically active few tiny peri gastric lymph nodes were also involved. Metabolically active tiny soft tissue nodule in the left lower lobe was described metastatic. Since the IHC markers PanCK and chromogranin negativity allowed to suspect primary gastric melanoma in this patient. The treatment of oligo metastatic Melanoma patients underwent gastrectomy along with gastrojejunostomy jejunojejunostomy. Very few cases of primary gastric melanoma have been reported. We report this case and presents the rarity of treatment design.

Keywords: Melanoma; Surgery; Gastric; Gastrointestinal

Background

Melanoma make up 1-3% of all malignant cancers. It is observed that melanoma typically appears in sites where melanocytes are commonly found, including the skin, eyes, meninges, and anal region, most commonly in the rectum and sigmoid colon. Primary gastric melanoma is not common clinical entity with 12 cases reported worldwide.[1] Most melanoma stomach identified represent metastases from cutaneous sources. According to a historical clinicopathologic analysis of 652 patients with disseminated melanoma, only 1.5% cases had gastrointestinal lesions antemortem. It is purposed that thorough physical examination, laboratory studies, and imaging is need of the hour to rule out metastatic disease in the setting of gastric melanoma.[2] As the verity of characteristics in melanoma stomach poses great challenges of differential diagnosis that delays the diagnosis and treatment is compromised.

We report the case of a 50-year-old Indian female with a polypoidal endophytic growth in the distal body of stomach with left lower lobe lung 3mm deposit revealed in contrast CT scan, which manifested itself with blood in vomiting and no other initial presenting symptoms. Biopsy of the mass and subsequent histological examination identified the lesion as a malignant melanoma and detailed clinical, laboratory, and imaging studies revealed no other primary lesion. Very few cases of melanoma stomach with no primary lesion have been described and we believe this represents an exquisitely rare presentation of melanoma stomach with metastases to lung.

Case Report

A 50 years old female presented with complaints of blood-stained vomiting on and off, for 3 months. In the month of February 2022 ultrasound was done. USG abdomen revealed thickening of walls of body of stomach with peri gastric oedema. Solid mass lesion in the pelvis on left side was adherent to left ovary. USG impression was suggestive of suggestive thickening of walls of body of stomach body of stomach as well as left ovarian mass probably metastasis. Endoscopy, observed large growth in the body of stomach probably carcinoma of stomach (Figure 1).

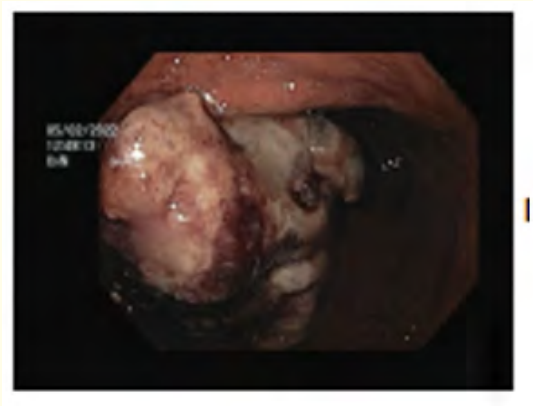

Figure 1: Endoscopy.

A contrast CT scan of abdomen suggestive of polypoidal endophytic growth in the distal body of stomach with left lower lobe lung 3mm deposit probably metastasis. In the findings of CECT ABDOMEN, irregular enhancing polypoidal endophytic growth seen in the distal body of stomach measured about (8.4 x 2 cm) along the lesser curvature.

Staging pet CT was done suggestive of above findings along with peri gastric lymph nodes and UD. PET CT WHOLE BODY (09.02.2022): showed metabolically active heterogeneously enhancing polypoidal soft tissue mass in the body of the stomach along the greater curvature as described - Primary. Low grade metabolically active few tiny peri gastric lymph nodes were also involved. Metabolically active tiny soft tissue nodule in the left lower lobe was described metastatic. No other significant metabolically active lesion noted in the rest of the scanned segment of body.

Endoscopy biopsy from stomach was suggestive of poorly differentiated malignancy. Advised HPE correlation; visualised chest sections show 3.6 mm solid nodule in left lower lobe-likely metastasis. 5.4 x 3.9 cm cyst with internal haemorrhage is seen in left ovary. No obvious solid enhancing component was seen. Diffuse fatty infiltration of liver was present (Figure 2,3).

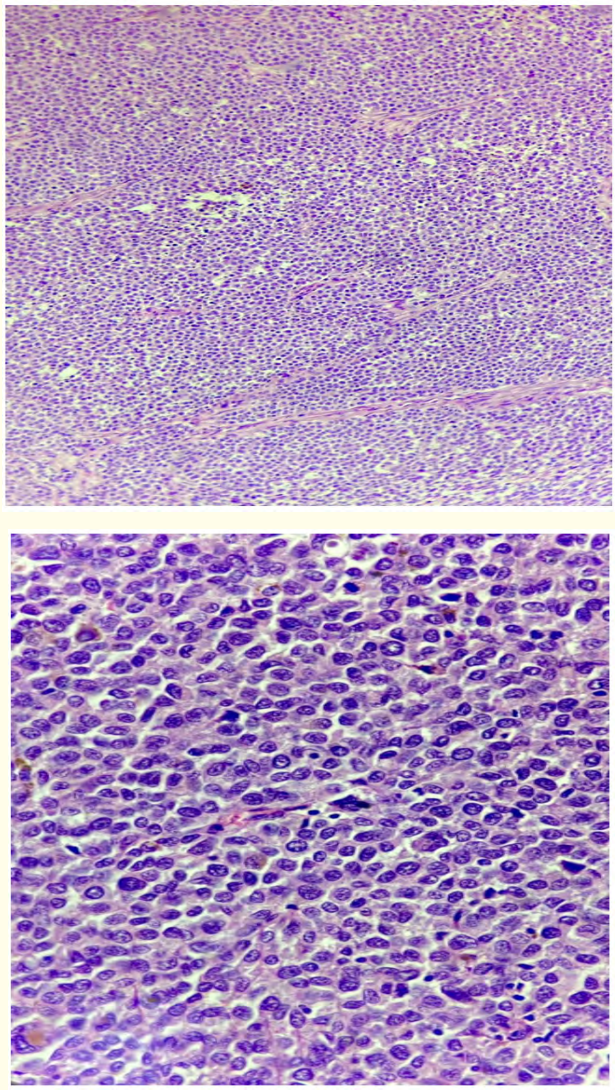

Figure 2,3: MICROSCOPY HPE low and high.

Immunohistochemistry marker evaluation from the biopsy suggestive of Amelanocytic melanoma. Endoscopic biopsy IHC markers showed; 1. CD43 - Membranous positive in atypical

lymphocytes, 2. CD45 - Patchy membranous positive in atypical lymphocytes, 3. BCL-2 - Diffuse cytoplasmic positive in atypical lymphocytes, 4. PanCK - Negative, 5. Chromogranin - Negative, 6. Ki67 - 25% positivity. In view patchy positivity CD43, CD45 and BCL-2 positivity, the possibility of lymphoproliferative lesion was considered high in differentials. (Figure 4): However Further IHC came positive for MelanA, HMB45 which favoured diagnosis of Melanoma.

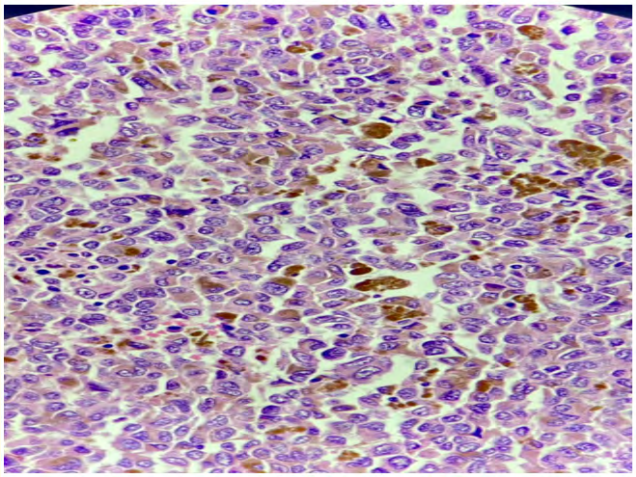

Figure 4: MelanA.

Separate Biopsy from the lung tissue also confirm to be infiltered by Melanoma cells (Figure 5).

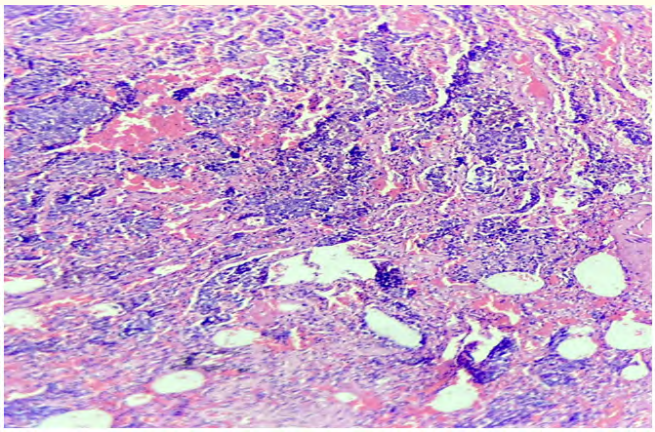

Figure 5: Tumor tissue in lung.

But PanCK and chromogranin negativity, ruled out the possibility of epithelial malignancy and neuroendocrine tumor.

As treatment of oligo metastatic Melanoma patients mastectomy of all the sites were considered. She underwent gastrectomy along with gastrojejunostomy jejunojejunostomy + oophorectomy + cholecystectomy. Since a complete resection of all the metastatic sites was achieved, tumour board planned adjuvant immunotherapy /BRAF inhibitors. based on the trial data for Melanoma.

Discussion

Being an aggressive cancer, melanoma commonly presents in tissues where melanocytes reside. The site includes the skin, eyes, meninges, and anal region. Melanoma diagnosis in stomach is most often the result of metastatic disease. The metastatic lesion of melanoma in stomach is up to 60% of cases reported in literature. In addition to these sporadic reports of primary melanoma stomach exist, about [1,2] cases in the literature- to the best of our knowledge [3].

Gastrointestinal cases of melanoma is the involution of sites like esophagus, small intestine, gall bladder, common bile duct, and transverse colon have also been reported. Esophageal melanoma appears to be the most common site [4]. The pathophysiology of primary melanoma within the gastrointestinal tract is not defined. Though two hypotheses have been proposed; first school of thought states neural crest derivatives cells may gain or retain the ability to de-differentiate into melanocytes that bears the potential to undergo malignant transformation. Second principle says the ectopic migration of melanocytes into the gastrointestinal tract was previously identified. The second hypothesis is suggested by the observation of benign melanosis involving the esophagus in cases of oesophageal carcinoma, anal melanoma, and esophagitis, respectively [5]. To this the feather end observation makes primary gastric melanoma a reasonable possibility.

The rarity of melanoma in gastric mucosa raises suspicion for a regressed lesion of cutaneous melanoma. But extensive workup to identify any potential metastatic sources for the disease is mandatory in such cases. For the diagnosis of primary non-cutaneous melanoma in an absence of prior melanotic lesion removal from the skin and no involvement of other organs upon presentation subsequent imaging with 18-FDG-PET/CT modalities can define the extent of the disease ensuring limitation to the stomach or metastasis elsewhere in concordance.

Adjuvant therapy for primary non-cutaneous melanoma is understudied. A prior case report detailed a patient who underwent adjuvant therapy following surgical resection of a primary gastric melanoma states that patient was treated with partial gastrectomy and splenectomy followed by 12 months of interferon, and showed no evidence of disease [6].

Vemurafenib, a BRAF V600E inhibitor approved for the treatment of metastatic melanoma, has not been evaluated as a potential adjuvant treatment for patients presenting with primary noncutaneous melanomas. Some evidence exists that mucosal melanomas do not harbor BRAF/NRAS mutations suggesting that anti-BRAF therapy would be ineffective for patients with gastrointestinal melanoma [7].

Here, There is a need to study the genetics of noncutaneous melanoma, including primary gastric melanoma, in order to identify novel tumor vulnerabilities.

Conclusion

Primary gastric melanoma is an uncommon malignancy with symptoms such as abdominal pain, nausea, hematemesis, and melena. Accurate diagnosis depends on biopsy and IHC staining for melanoma markers. The designation of a primary lesion is dependent on an extensive dermatologic examination that does not identify an overt melanotic lesion and 18-FDG-PET/CT imaging that does not show pathologic 18-FDG uptake in any other organs. Adjuvant therapy has not been fully evaluated in patients with primary gastric melanoma.

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