



## Case Report

## Metastases of malignant melanoma to stomach - An unusual presentation

Arpit Jain<sup>1,\*</sup>, Akanksha Jaju<sup>2</sup>, Minaal Iyer<sup>1</sup>, Ramesh Arya<sup>1</sup>, Preety Jain<sup>1</sup><sup>1</sup>Dept. of Radiation Oncology, Government Cancer Hospital, MGGMC, Indore, Madhya Pradesh, India<sup>2</sup>Dept. of Pathology, Tata Main Hospital, Jamshedpur, Jharkhand, India

## ARTICLE INFO

## Article history:

Received 07-12-2018

Accepted 21-03-2020

Available online 19-08-2020

## Keywords:

Malignant melanoma

Stomach metastasis

## ABSTRACT

**Background:** Malignant melanoma has been known capable of inducing metastasis in most of the human organs. It is the most common metastatic tumor of the gastrointestinal (GI) tract; most commonly involving the small and large bowels and rectum; however, the stomach is a rare site. Gastrointestinal (GI) metastases are seldom diagnosed before death.

**Case Presentation:** Here we present a known and treated case of malignant melanoma of left foot, later on presenting with non-specific gastric symptoms. UGIE revealed a growth in the gastric antrum for which mucosal biopsy was performed. Histopathology revealed a poorly differentiated carcinoma and with the help of IHC obtained a conclusion of metastatic lesion of malignant melanoma.

**Conclusion:** Malignant melanoma of extremities warrants a thorough endoscopic evaluation for gastrointestinal metastases as > 60% cases are found to have lesions in stomach at autopsy. Hence an early diagnosis of the metastatic lesions mandate for better survival of the patients.

© 2020 Published by Innovative Publication. This is an open access article under the CC BY-NC license (<https://creativecommons.org/licenses/by-nc/4.0/>)

## 1. Introduction

Melanoma is a malignant tumour of melanocytes and primarily occurs in the skin. It behaves aggressively and has high rate of metastases, hence the overall prognosis is poor. 90% of all deaths related to skin cancer are related to melanoma. The regional lymphatic system accounts for two thirds of all primary metastases. Gastrointestinal melanoma is mostly the result of metastatic disease. Autopsy series report up to 60% of patients who die of metastatic melanoma having gastrointestinal (GI) involvement, with gastric involvement in approximately 20% of these cases.<sup>1,2</sup> Patients with distant metastases of malignant melanoma have the median survival rate of 6-9 months only. We present the case of a 50-year-old female patient with a Malignant melanoma with Gastric metastases.

## 2. Case Report

A 47 year female was presented to our institution with complaint of a Hyperpigmented lesion over Right foot since 2 month. On examination, she was conscious, cooperative, oriented to time, place and person, vitals stable. Examination of Right foot revealed a 3cmx4cm skin lesion with blackish discoloration, irregular flat margin, non tender, no discharge, no ulceration. Full skin and ocular examinations, chest X-rays, and abdominal sonogram excluded the presence of any other clinically detectable neoplastic deposits. Patient underwent excision biopsy and Skin grafting from right thigh was done. Biopsy revealed Nodular Malignant Melanoma Clark stage V, AJCC stage pT4NxMx. Patient was planned for Prophylactic Right Inguinal Lymph Node Dissection. Biopsy shown No evidence of metastatic deposits of malignant melanoma / malignancy (s/o nonspecific reactive lymphadenitis). During the course, Patient had Laparoscopic assisted Vaginal Hysterectomy + Bilateral Salphingo-oophrectomy in the vicinity of Fibroid Uterus. Her USG findings were

\* Corresponding author.

E-mail address: [arpitjain8390@gmail.com](mailto:arpitjain8390@gmail.com) (A. Jain).

:- Uterus bulky of size about 10.9X6.9 cm, subserous fundal fibroid of 6.98 X 7 cm size with thin midline hypoecho bulky cervix). Biopsy shown uterine adenomyosis with Leiomyoma with no evidence of malignancy. Patient got admitted with complaints of right inguinal lymph node enlargement of size 6x5x3 cm. Right inguinal node dissection was underwent.

### 2.1. Histopathological examination findings were

Gross Description: Received single fibrofatty tissue labelled as right inguinal lymph node measuring 6.5x5.4x4.1 cm, blackish grey in color, firm in consistency.

### 2.2. Microscopic exam

Section shows lymph node capsule and underlying nodal tissues

extensively replaced by sheets of pleomorphic tumor cells arranged in discohesive sheets, separated by fibrovascular septae. Cells are oval with clear to vesicular nuclei, macronucleoli and moderate cytoplasm. Melanin pigments and focal area of hemorrhage seen with extra capsular extension present. Above findings are consistent with metastatic malignant melanoma deposits- left inguinal node. IHC marker study shows HMB45, melan A reactivity.

1 year later, our patient presented with c/o melena since 10 days and anemia. In order to rule out an underlying cause as well as metastases of the mucosa, we performed an upper GI endoscopy which showed a growth in gastric antrum ?? Malignant, for which multiple biopsy was performed. The rest of the stomach, the esophagus, and the first part of the duodenum were normal.

### 2.3. The histological examination of the biopsies

Gross Description: Received multiple tiny greyish soft tissue fragment collectively measuring 0.8x0.3x0.2 cm  
Microscopic Exam: sections show sheets of tumor cells having moderate cytoplasm hyperchromatic nuclei, exhibit moderate nuclear pleomorphism with occasional prominent nucleoli. Few of the cells show intracytoplasmic and extracellular brown pigment, focal areas of necrosis. Features suggestive of a poorly differentiated carcinoma/metastatic malignant melanoma.

## 3. Discussion

Melanoma is commonly occurs in tissues where melanocytes present, as the skin, eyes, meninges, and anal region. They are highly aggressive tumors and can metastasise to any organ. They are the most common metastatic tumor to the gastrointestinal tract, includes the small bowel (50%), large bowel (31%), and anorectum (25%).<sup>3</sup> Metastasis to the stomach is rare, about 20% of cases with gastrointestinal metastasis from melanoma.

Clark level of the primary lesion often correlates with the incidence of intestinal metastasis, i.e. less than 6% for level I, 6 to 24% for level II, and more than 70% for level III or greater. Because of non-specific GI symptoms and only manifest in 1–4% of patients with metastases; such as fatigue, nausea, vomiting, abdominal cramping or pain, anemia, weight loss, melena, diagnosis is largely missed. Radiographic studies and endoscopic evaluation makes the diagnosis.

Based on Endoscopic morphological appearance gastric metastasis may be classified into three types: ulcerated melanotic nodules, submucosal masses with ulcerations, and mass lesions with necrosis and melanosis.<sup>4</sup> Most common site for gastric metastases is the body and fundus, most often at the greater curvature. Immunohistochemical Confirmation of melanoma is made if the biopsies stain positively with S-100 protein and HMB-45 glycoprotein. Primary and secondary nature of gastric melanoma is difficult to establish. The criteria for a diagnosis of primary intestinal melanoma include 1) no other concurrent melanoma or atypical melanocytic lesion of the skin, 2) no evidence of extraintestinal metastatic spread of melanoma, and 3) intramucosal lesions in the overlying or adjacent intestinal epithelium.

Because of rare entity, the data supporting gastric surgery are limited beyond case reports. In a retrospective review of 124 patients with melanoma metastatic to the gastrointestinal (GI) tract, median survival in patients undergoing curative resection was 48.9 months, compared with only 5.4 months and 5.7 months in those undergoing palliative procedures and nonsurgical interventions, respectively.<sup>5</sup> Even in the surgical incomplete resection of lesion, mostly patients with melanoma and GI tract metastases can have palliation of symptoms with minimal morbidity and mortality. The complete surgical resection of GI tract metastases is associated with high 5-year survival rate. Therefore, surgery should be strongly recommended for patients with melanoma and distant metastatic disease.

Adjuvant therapy for primary mucosal melanoma is unexplored and poorly understood so there are few current treatment recommendations for patients after surgical excision. In a case report, the patient received Interferon therapy for 12 months in adjuvant setting following partial gastrectomy and splenectomy of a primary gastric melanoma, and showed no evidence of disease upon UGI endoscopy two years post-operatively.<sup>6</sup> Vemurafenib, a BRAF V600E inhibitor approved for the treatment of metastatic melanoma, has not been evaluated as a potential adjuvant treatment for patients with primary mucosal melanomas.

Although early clinical experience advocated melanoma to be a radioresistant tumor. However, RT can provide useful palliation for patients with unresectable metastatic melanoma. In adjuvant settings, postoperative radiation can

improve locoregional disease control, even though with potential toxicity and limited survival benefit.<sup>7</sup>

#### 4. Conclusion

The primary malignant melanoma has an early tendency to metastasise. GI metastatic melanoma presents with non specific GI symptoms like anemia, melena, therefore it is important to perform an upper GI endoscopy to rule out metastatic disease in highly suspicious cases. Because of non specific presentation and relatively rare entity, most cases are not detected until autopsy. A primary malignant melanoma of the stomach can only be diagnosed in the absence of other lesion and the diagnosis should be confirmed by immunohistochemical staining. A multimodality approach should be targeted for an effective treatment. Resection in case of distant metastasis to stomach should be attempted if R0 resection can be achieved to increase the patient's overall prognosis.

#### 5. Source of Funding

None.

#### 6. Conflict of Interest

None.

#### References

1. Liang KV, Sanderson SO, Nowakowski GS, Arora AS. Metastatic Malignant Melanoma of the Gastrointestinal Tract. *Mayo Clin Proc.* 2006;81(4):511–6.
2. McDermott VG, Low VH, Keogan MT, Lawrence JA, Paulson EK. Malignant melanoma metastatic to the gastrointestinal tract. *Am J Roentgenol.* 1996;166(4):809–13.
3. Goral V, Ucmak F, Yildirim S, Barutcu S, İleri S, Aslan İ, et al. Malignant melanoma of the stomach presenting in a woman: a case report. *J Med Case Rep.* 2011;5(1):94.
4. Iconomou TG, Tsoutsos D, Frangia K, Gogas H, Papadopoulos S, Georgountzos V, et al. Malignant melanoma of the stomach presenting with an unknown primary lesion. *Eur J Plast Surg.* 2003;26(3):153–5.
5. Ollila DW, Essner R, Wanek LA, Morton DL. Surgical Resection for Melanoma Metastatic to the Gastrointestinal Tract. *Arch Surg.* 1996;131(9):975–80.
6. Alazmi WM, Nehme OS, Regalado JJ, Rogers AI. Primary gastric melanoma presenting as a nonhealing ulcer. *Gastrointest Endosc.* 2003;57(3):431–3.
7. Mahadevan A, Patel VL, Dagoglu N. Radiation Therapy in the Management of Malignant Melanoma. *Oncol.* 2015;29(10):743–51.

#### Author biography

**Arpit Jain** PG Student

**Akanksha Jaju** PG Student

**Minaal Iyer** PG Student

**Ramesh Arya** Professor

**Preety Jain** Associate Professor

**Cite this article:** Jain A, Jaju A, Iyer M, Arya R, Jain P. Metastases of malignant melanoma to stomach - An unusual presentation. *Indian J Pathol Oncol* 2020;7(3):480-482.