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CASE REPORT

Primary Anorectal Amelanotic Malignant Melanoma: A Case Report

Najam Uddin, Muhammad Iqbal, Hina Hashmi

Atomic Energy Medical Centre (AEMC), Jinnah Post Graduate Medical Centre (JPMC) Karachi, Pakistan.
Correspondence to: Dr. Najam Uddin, Email: najam_uddin78@hotmail.com, ORCid: 0000-0002-1230-2482

ABSTRACT

Anorectal mucosa melanoma is a rare malignancy comprising of less than 5% of all malignancies in this region. It has poor prognosis and no obvious consensus guideline for the treatment is present. It is usually treated on the lines of cutaneous melanoma. Advanced disease due to late diagnosis is grave feature. Surgery is mostly palliative. We reported a case of middle aged with biopsy proven, non-metastaticamelanotic melanoma of anorectum with localized disease presented with bleeding per anum for four months. MRI and colonoscopy revealed localized mass. She was underwent abdominoperineal resection (APR) with adequate surgical margins and nodal dissection. Post-operative base line imaging was negative for any residual disease. She was kept in follow up one year and no recurrence was observed during this time. Patient lost follow up later.

Keywords: Anorectal Melanoma, Rare Entity, Abdominoperineal Resection.

INTRODUCTION

Anorectal melanoma is a rare and highly aggressive mucosal malignancy. Survival rate is 2.24 years with surgery.[1] It is reported in many studies of less than 2 % of all melanomas and malignancies of this region. It is more frequent at the 6th–7th decade, mostly in women.[2] It is estimated that 26–38% of patients with already have metastatic diseases at the time of diagnosis.[3] Patients present with the symptoms of bleeding per anum, weight loss, mass in anorectal area or metastatic symptoms of brain, lung and liver.

Anorectal melanoma is more observed in young and middle aged females as reported in various studies. Lesions can involve rectum, anal canal or both but lesions mostly grow in the anal canal, followed by dentate line and the rectum.[4] Although melanocytes are not present as normal histological layer in GIT but development of melanoma in GIT may be attributed to origin from intestinal Schwan cells or from melanocytes of neural crest cells as proposed in various studies. The histological criteria for diagnosis incudes the atypical melanocytes in the basal layer of superficial epithelium, invasion into the surrounding, nuclear pleomorphism and negative IHC stains for CK AE1/AE3, CD 17 and desmin while positive stains for Melanin A, S-100 and HMB-45. Recently, many serum tumor markers are under investigation like S-100B, enolase, MIA and YKL-40.[5] Serum LDH has lower specificity and its raised serum level may represent the presence of metastatic disease.

MRI of T1 weighted sequence shows high signal andlow signal intensity in melanotic and amelanotic varieties respectively. Both the varieties show heterogeneous contrast enhancement. CT scan chest and abdomen may show pulmonary and hepatic metastasis. PET CT scan is also a good nuclear medicine imaging tool for whole body survey for metastasis.

Anorectal melanoma is staged in: stage I (local disease), stage II (local disease with regional lymph nodes), and stage III (with distant metastasis).[5] Prasad ML et al.[6]classified mucosal melanomas in Level 1 (local or *in situ* tumor); level 2 (regional with invasion of lamina propria), level 3 (disseminated).No consensus treatment exist but most of the case are treated by abdominoperineal resection (APR) with or without radiotherapy, chemotherapy, targeted therapy or immunotherapy.

CASE REPORT

We reported a case of 40 years old female resident of Karachi, married, no known co morbids and a house wife presented with the complaints of bleeding per anum and generalized body weakness for last four months. She had no symptoms of gut obstruction, anemia or any metastatic symptoms like pulmonary symptoms, neurological symptoms or hepatic symptoms regarding systemic spread of the disease. She had no significant family history or past medical, surgical history. No history of addiction or any contact with HIV and insignificant sexual history. Blood in the

stool was bright red, small in amount and present at the surfaces of stool. Per rectal digital examination revealed normal sphincter tone and a mass at 4 cm from the anal verge, firm, rough irregular surface, slight bleeding to touch andnontender. No inguinal nodes were palpated. Per vaginal examination was normal. General physical and Systemic examinations were normal. Patient was ECOG-1 performance status. Initially she was treated for hemorrhoids and local application of anti-inflammatory creams but did not relieve and status worsened.

A colonoscopy is advised and it revealed an ulcerated polyp at 5 cm from anal verge. Multiple biopsies were taken and scope passed up to cecum as shown in Figure 1.

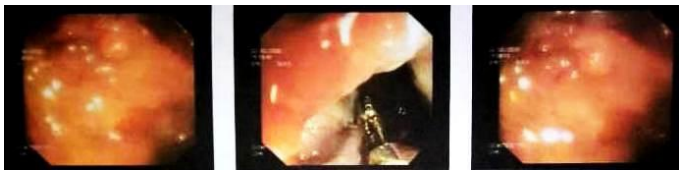

Figure 1: Colonoscopy shows an ulcerated Polyp 5 cm from anal verge

Biopsy showed tumor cells arranged in sheets with nuclear pleomorphism and intracellular inclusions. No pigment was seen in the tumor cells. IHCs were positive for Melanin A, HMB-45 and S-100 while negative for CK AE1/AE3 and reported as malignant melanoma by the histopathologist.

A MRI of abdomen and pelvis showed low signal intensity lobulated lesion in anorectal region on T1 weighted images, contrast enhancement and high signal intensity on T2 weighted and Fat Sat images with mural thickening of 3.7 cm and craniocaudal extent is 10.2 cm. There is peri rectal fat stranding and mass is abutting the uterus without invasion. Uterus and fallopian tubes are normal as shown in Figure 2, 3 and 4 revealing contrast enhanced axial image and sagittal image in figure 3 and 4 respectively with clear differentiation the extent of the mass.

CT scan chest abdomen and pelvis shows no metastasis in the lung, liver, adrenal or anywhere in chest and abdomen and no any other incidental findings.

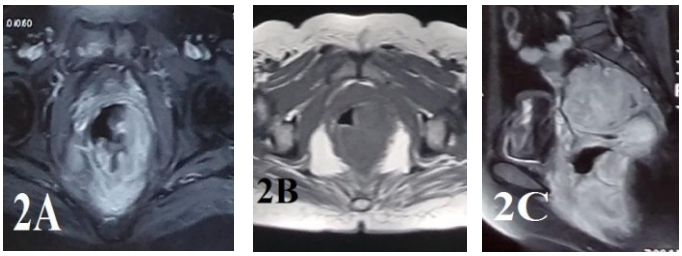

Figure 2: 2A shows T2W image with high signal intensity lesion, 2B, T1W low signal intensity lesion, 2C contrast enhanced lesion

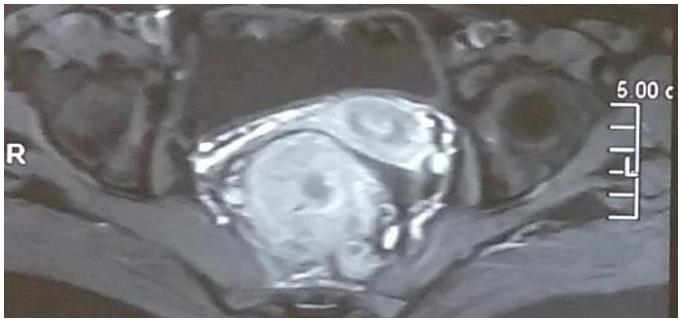

Figure 4: T 1 weighted corona; section showing longitudinal extent of the disease Figure 3: shows contrast enhanced mass pushing the Uterus and bladdar aside

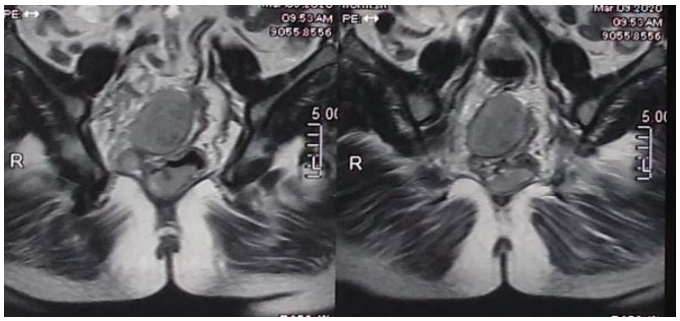

Figure 4: T 1 weighted corona; section showing longitudinal extent of the disease

Her complete blood count, serum urea creatinine, electrolytes, liver function tests, HbsAg, Anti HCV, Anti HIV antibody and LDH were in normal range. Her pregnancy test was negative and she had completed her family.

Her case was discussed in the multidisciplinary meeting and decided for abdominoperineal resection. She was again counseled about the disease and surgical treatment outcome and untoward effects like insertion of permanent colostomy bag and written consent was obtained. Asession with psychologist was also conducted with her family for their mental wellbeing and confidence.

She was obtained general anesthesia fitness after completion of required procedures and then underwent APR successfully. She was recovered through postoperative period without complication. Her histopathology was consistent with malignant melanoma withthe absence of melanin in the tumor cells and 4 cm proximal, 4 cm distal and 0.2 cm circumferential microscopic margins respectively. No lymphovascularor perineural invasion was seen. None of the 20 recovered nodes were found positive for tumor. It was staged as pathological stage I localized disease.

A baseline MRI pelvis with contrast after 4 weeks of resection showed no residual disease withpost-surgical

changes while CT scan chest abdomen and pelvis were unremarkable. Patient was kept on follow up for every three months by history and physical examination and biannual MRI pelvis. She was disease free for one year on follow up and then lost follow up and then moved away to her parent city.

DISCUSSION

Anorectal melanoma is a rare malignant malignancy and no consensus guideline exists for the treatment. Few cases have been reported in the literature and most of them have poor prognosis as compared with counter parts of cutaneous melanomas.

This tumor usually presents with advanced local invasion while distant metastasis is less frequent. Our reported case is subvariety of this anorectal melanoma i.e.,amelanotic melanoma revealed by its histology as absence of melanin in tumor cells. Amelanotic melanoma have poorer prognosis. While the typical therapeutic approach remains surgical resection, there is no consensus on which surgical approach –WLE or APR – is preferred. APR is regarded as the standard surgery for treatment of AMM because it can control lymphatic spread and obtain a larger negative margin for local control.[7]

Reported patient was timely diagnosed and showed disease free for one year after APR with extended lymph nodal dissection, while literature also show that APR with extended lymph nodal dissection is favorable factor for survival. As many guidelines recommend minimum 12 nodes resection with total mesorectum excision technique but still anorectal melanoma lymph nodal dissection is debatable but extrapolating the adenocarcinoma data, it is advisable to resect at least 12 nodes. Patients without lymph node metastasis have 5-year survival rate of 20 versus 0% in patients with metastasis. There are no long term survivors among patients with stage II and stage III disease.[8] Many groups have extensively studied the impact of resection margins on the prognosis of anorectal melanoma. In a Swedish study of anorecal melanoma in 251 patients, it was reported that irrespective of the surgical approach, patientsin whom R0 resection was achieved had a better overall 5-year survival than patients with involved margins.[9] Marginal status also unknown in literature and clear margins distance also can be extrapolated from adenocarcinoma as 4 cm proximal and distal margins each and 0.2 cm radial margin which was achieved in our case and had recurrence free survival of 1 year, however literature reviews showed no significant survival advantage of adequate surgical margins and mostly surgery was categorized as palliative surgery.

Poor prognostic factors for survival are extensive depth of invasion, large size, perineural invasion, duration of symptoms and involvement of lymph nodes. There is a possibility that MRI may overestimated the tumor extent in our reported case and sphincter preserving surgery might be possible on the cost of compromised microscopic surgical margins and nodal status which could later be treated by external beam radiotherapy in adjuvant setting but in that case it was quite difficult to deliver the high dose radiation or hypofractionation to pelvic area regarding gut tolerance.

The role of immunotherapy, chemotherapy and targeted therapies is mostly seen for unresectable disease or gross residual resection (R2 Resection) and almost all in palliative setting.

CONCLUSION

Anorectal mucosal melanoma may have better prognosis provided if early diagnosis and adequate surgery is done timely with or without adjuvant treatment. There are sparse data regarding standard of care for this disease. We need large series of cases to form randomized trials to establish consensus guidelines for the management of this malignancy. Molecular research also needed for the histological and molecular origin of this disease in anorectal region.

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