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Case Report

Spindle anorectal melanotic melanoma in a 70 year old woman

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ABSTRACT

A 70 year old lady presented with symptoms of changed bowel movements and rectal bleeding. She was operated and the resected specimen of intestine was brought to Department of pathology for histopathological examination. The specimen was fixed in 10% formal saline. Tissue bits were taken from the representative areas in the mass for further fixation and processing. Sections were stained with hematoxylin and eosin and thoroughly examined under microscope for establishing the diagnosis of Spindle variant of melanotic melanoma. Anorectal melanomas are rare malignancies and an infrequent occurrence in the seventh decade of life. The aim was to evaluate a pigmented anorectal mass and establish its diagnosis in a 70 year old woman by thorough histopathological examination.

Keywords: Anorectal, Melanotic melanoma, Histopathology

INTRODUCTION

Only about 1% of all anorectal malignancies comprise melanomas which typically present in the fifth or sixth decade of life, seen predominantly in woman. Patients present with local symptoms like rectal bleeding and a changed defecation pattern.

CASE REPORT

A 70 year old female patient complaining of foul smelling diarrhoea with presence of mucus and pus since a duration of 4 months and a history of decreased appetite was taken to the surgical department. Antero-posterior resection of anal canal and rectum with end colostomy was performed and the specimen of intestine was submitted to pathological examination.

The specimen was fixed overnight in 10% formal saline after cutting open the intestine and parallel incisions with toast-racking were placed for proper fixation. After gross visual inspection, 2x2x0.5 cm tissue bits were taken from the representative areas in the mass proper, the junction of mass with surrounding mucosa and the resected margins. After further fixation in formalin and dehydration in increasing strengths of alcohol, clearing with xylene, followed by paraffin impregnation and embedding, section cutting by rotary microtome was done. The sections were cut 3-4 microns thick. They were then stained with Harris haematoxylin and eosin. The sections were mounted in DPX and subjected to thorough microscopic evaluation under increasing powers of compound microscope. The slides were examined from upper end of left side to lower right margin in zig zag fashion and qualitative examination of architectural arrangement and cytological features viz cytoplasm and the nucleus with numerical evaluation of nucleoli and mitotic figures was performed.

Gross examination revealed a 30x10x5 cm segment of intestine. The mucosal surface showed a polypoid, irregular, poorly circumscribed, fungating mass with ulcerated surface and broad infiltrative base, gray brown in colour with areas of black pigmentation involving the rectum and anal canal. The growth, measuring 7x7x3 cm was situated 1 cm away from the resected anal margin

and 23 cm from the proximal margin. Anal skin appeared uninvolved grossly. There were areas of haemorrhage and necrosis. The mass was friable with areas of softening. The proximal bowel was constricted. The mass appeared to involve the serosa as well. The surrounding mucosa had not lost its sheen. A total of 13 lymph nodes were dissected out from the pericolic fat.

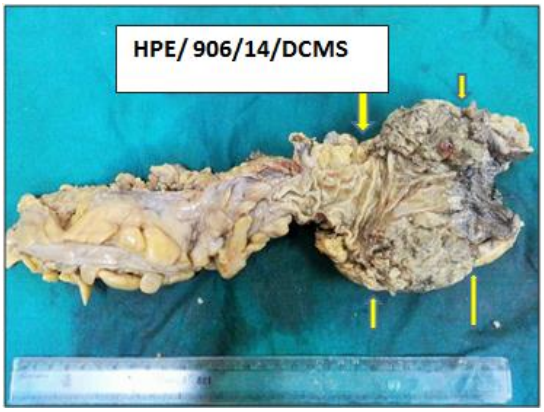

Figure 1: Gross examination revealed a 30x10x5 cm segment of intestine.

Microscopic examination of sections from the large polypoid mass revealed an irregular lesion with invasive margins, composed of sheets of ovoid to spindle shaped cells with moderately abundant, homogenous cytoplasm and large, vesicular, pleomorphic nuclei with tapering ends, irregular nuclear margins, coarse granular chromatin, nuclear grooves and prominent eosinophilic nucleoli. The spindle shaped cells had tapering ends. Multinucleated tumour giant cells were also seen. Melanin pigment was seen in abundance, predominantly intracellular with melanin incontinence in areas. Stroma was scant and barely visible. Mitotic activity was high with 3-4 atypical mitoses per high power field. Apoptotic bodies, areas of haemorrhage and necrosis were also noted. The tumour was seen to infiltrate through the muscular layer upto the perimuscular fat. Eleven out of the thirteen resected nodes were involved by the tumour. Resected ends were free of tumour.

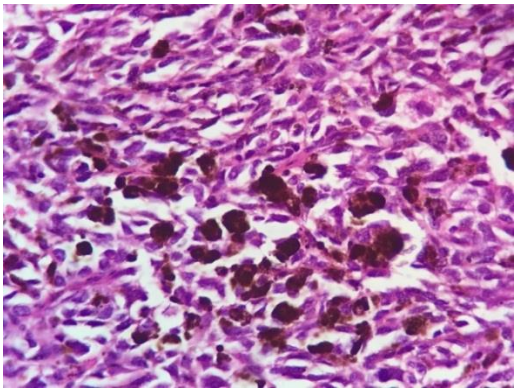

Figure 2: Microscopic examination of sections from the large polypoid mass.

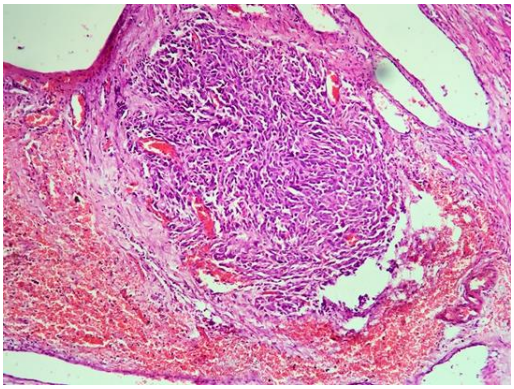

Figure 3: Microscopic examination of sections from the large polypoid mass.

DISCUSSION

Primary melanoma of the anus and rectum was first reported by Moore[1] in 1857. It is a rare and highly aggressive malignancy of the elderly, which often affects females more commonly in the 5th and 6th decade[2,4,6-8] and less commonly in the 7th decade. Anorectal malignancies are predominantly adenocarcinomas and squamous cell carcinomas.[3] Melanomas constitute only approximately 0.5% of all colorectal and anal cancers.[2,4] Approximately one melanoma is seen for every 250 adenocarcinomas of anorectal region.[13] Anorectal region is the third most common location of melanoma involvement, skin being the first followed by ocular region.[2,4] Lesions may affect the anal canal, rectum or both. Majority of melanomas occur within 6 cm of the anal rim.[4,5]

Caucasians have a 1.7 fold higher prevalence compared to African Americans.[7] Incidence is reported as 0.4% per million[6] with 1.8 fold increase in the last 2 decades, probably due to improved diagnostic modalities.[7] Patients may present with rectal bleeding, associated with pain or discomfort, change in bowel habits, prolapsed tumour mass and haemorrhoids.[3,4,9-11] Grossly, the lesions may be polypoid, with or without pigmentation, and can be ulcerated as well. Obvious melanin pigmentation is present in about 20% of patients.[9,11,12,14] The tumour is located usually in or close to pectinate line, and may grow towards rectal ampulla. It may extend along the submucosa proximally towards rectum, simulating a primarily rectal tumour.[13]

Microscopically, the typical prototype of malignant melanoma is easily identified because of its prominent melanin pigmentation, invasion of surrounding tissue, marked cytologic atypia, nuclear grooves, folds and pseudoinclusions, large eosinophilic nucleoli and abundant mitotic figures, some of them atypical. However, this may not always be so. Malignant melanoma is notorious for the great microscopic variability it may exhibit. The cells may be epithelioid, spindle shaped or extremely bizarre, ranging from the size of a small lymphocyte to multinucleated giant forms. Cytoplasm may be eosinophilic, basophilic, foamy or

signet ring type, rhabdoid, oncocytic or completely clear. Melanin production may be massive enough to obscure the cellular details.[13]

Chute et al. reported 4 histologic cell types: epithelioid, spindle cell, lymphoma-like and pleomorphic.[14] The mitotic rate averaged 2.8 mitotic figures per high-power field in 17 cases of a primary anorectal malignant melanoma.[14] Prognosis is poor[16-18] with the 5-year survival rate reported to be less than 20%, and a median survival of 24 months.[15] Poor prognostic factors include the stage of the disease at the time of diagnosis, tumour thickness (Breslows >2 mm), symptom duration of more than 3 months, and nodal status. Perineural invasion and amelanotic histology are also bad prognostic factors.[12] Mesenchymal nodes are preferentially involved but inguinal node involvement is a poor prognostic feature.[9,19-21]

CONCLUSION

Spindle melanotic melanoma is a rare occurrence in the 7th decade. A thorough gross examination of the excised surgical specimen in immediate in situ stage followed by representative sampling, serial dehydration in ascending grades of alcohol, clearing in hydrocarbon xylene, embedding in molten paraffin wax, fine sectioning by rotary microtome, followed by uniform nuclear and cytoplasmic staining and finally, meticulous evaluation of the histopathological sections leads to a comprehensive diagnosis and formulation of expert opinion in the coordinated management of patient by the clinician.

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