Case Report

Malignant Melanoma Of Anal Canal

Ishan Dhungana, Ranjan Raj Bhatta, Greta Pandey, Suraj Upreti, Nandita Jha, Shankar Bastakoti,

Department Of Pathology, B.P.Koirala memorial cancer hospital, bharatpur, Chitwan.

Abstract:

Anal melanoma (AM) is a rare and highly aggressive mucosal melanocytic malignancy. We report a case of 70 year old male presented with chief complaints of anal pain and intermittent rectal bleeding with clinical diagnosis of Polyp or Carcinoma. On histopathology examination malignant melanoma was suggested which was further confirmed by immunohistochemistry(S100 and HMB 45 strongly positive). Anal melanoma is rare neoplastic condition with catastrophic outcome.

Key Words: Anal, Melanoma, HMB 45 and S100.

Introduction

Anal melanoma (AM) is a rare and highly aggressive mucosal melanocytic malignancy. It comprises approximately 1% of all melanomas and about 0.5–2% of all ano-rectal malignancies.[1] It is the third most common after melanomas of the skin and retina. The most common cause of presentations includes rectal bleeding, rectal pain, and change in bowel habit or bowel mass.[1] It affects anal canal, rectum or both with a tendency to spread along sub-mucosal planes.[2]

Case Report

We report a case of 70 year old male presented in surgical OPD with chief complaints of anal pain and intermittent rectal bleeding especially during defecation. On digital rectal examination polypoidal mass identified and clinical diagnosis of Polyp or Carcinoma was made. Biopsy of same patient was done and histopathology sample was received in pathology department. Routine H&E examination was done and shows a sub-mucosal mass comprising of proliferations of epitheliod to spindled shaped cells having irregular nuclear contour nuclei and moderate amount of cytoplasm. Few areas shows intra-cytoplasmic brownish black coloured pigment. Immuno-histochemistry (IHC) stain available at BPKMCH was done including HMB 45(Human Melanoma Black) and S100 (Saturated 100% ammonium sulfate at neutral pH). A diagnosis of Melanotic Melanoma was confirmed.

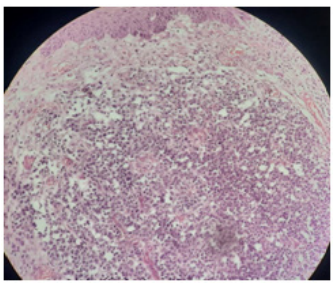

Figure 1: (H&E, 20x; Low Power View Showing Squamous Lining with Underlying stroma shows tumor cells arranged in sheets).

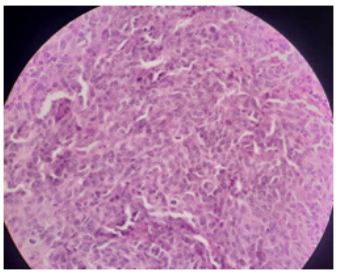

Figure 2: (H&E,40x); High Power Field showing epitheliod as well as spindled shaped tumor cells in sheets.

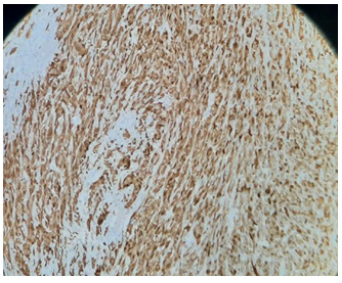

Figure 3: (Immunohistochemistry Slide S100); Epitheliod and Spindled shaped tumor cells express both Nuclear and Cytoplasmic Staining.

Address of Correspondence: Ishan Dhungana ; ishanhalo@gmail.com; 9841243684

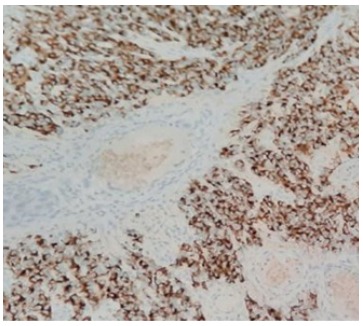

Figure 4: (Immunohistochemistry Slide HMB45); Tumor cell shows strong cytopalsmic staining.

Discussion:

Primary malignant melanoma of the anus and rectum is a rare and highly lethal malignancy of the elderly, which often manifests at an advanced stage. [3]

It is the third most common after melanomas of the skin and retina. The malignancy affects the anal canal, the rectum or both with majority occurring within 6 cm of the anal verge.[4] The disease typically affects Caucasians, females, and patients between the fifth and eighth decade of life with a mean incidence of 64.3 yrs (58.1 - 70.2 yrs).[2] Moore et. al, reported the first case of melanoma of anus and rectum in literature in 1857.[6] The patients present with pain, anal mass, bleeding per rectum, tenesmus or change in the bowel habits. The clinical symptoms of anal melanoma are misdiagnosed in about two thirds of patients as hemorrhoids, skin tag or polyp. Anal melanoma presents as intra-luminal polypoid mass or circumferential wall thickening with minimal perianal infiltration and absence of colonic obstruction.[7,8] The patient in our case showed polypoidal mass which is common finding in primary anal malignant melanoma. The anorectal melanoma has the tendency for submucosal infiltration. In our case also tumor mass presented with submucosal spread. The invasive cells are predominantly of epitheliod or spindled type, desmoplastic tumor also occurs.14 The submucosal spread predisposes to lymph node metastases in 44% of cases.[9] Distant metastases are present in up to 90% of cases with lymph node involvement.[10] The most common sites for distant metastases are inguinal lymph nodes, mesenteric lymph nodes, hypogastric lymph nodes, para-aortic lymph nodes, liver, lung, skin, and brain. As with melanoma elsewhere the most useful criteria for differentiating AMs form other malignancies are high index of suspicion(because the amelanotic lesion can mimics poorly differentiated carcinoma, lymphoma or even stromal tumor), melanin production, nesting growth pattern, cellular discohesion, junctional changes in H&E stain and appropriate IHC including positive staining with S100 and melanin marker HMB-45 and Melan-A. [15-16] AM is commonly positive when stained with c-kit, which might led to confusion with anorectal stromal tumor, especially when melanoma is spindle shaped variant.[17] Prognosis of AM is poor. The 5-year survival rate can range from 16% to 34% in patients diagnosed with anorectal melanoma. [11]

Although the histological type of AM doesn't affect survival, the thickness of tumor appears to influence the outcome. The small subset of AMs 2 mm or less in thickness have an excellent prognosis when compared to all thicker AM.[18] Best hope for survival is offered by early detection and complete surgical removal.[4] There is no consensus on which surgical approach is preferred. A number of studies claim that abdomino-perineal resection (APR) is the treatment of choice because it can better control the lymphatic spread and it allow to obtain larger negative surgical margins.[12] Other studies instead have recommended only a sphincter saving excision (wide local excision) because treatment is often palliative and wide radical surgery is unnecessarily mutilating. [13]

Conclusion:

Anal melanoma is rare neoplastic condition with catastrophic outcome.

References:

1 Singer M, Mutch MG: Anal melanoma. Clin Colon Rectal Surg 2006; 19:78–87.

2. S.H.Q. Quan, Anal cancers. Squamous and melanoma, Cancer 1992; 70:1384e1389.

3. Chute DJ, Cousar JB, Mills SE: Anorectal malignant melanoma: morphologic and immunohistochemical features. Am J Clin Pathol 2006; 126:93–100.

4. Saverio Latteri, Michele Teodoro, Michele Malaguarnera, Maurizio Mannino, Giuseppe Currò, Gaetano La Greca. Abdominal perineal resection or wide local excision in

primary anorectal malignant melanoma. Case report and review. Ann Med Surg (Lond) 2017 Jul; 19: 74–77. 2017 Apr 29. doi: 10.1016/j.amsu.2017.03.039

5. Zhang S, Gao F, Wan D. Effect of misdiagnosis on the prognosis of anorectal malignant melanoma. J cancer Res Clin Oncol. 2010; 136: 1401-1405. PubMed: https://www.ncbi.nlm.nih.gov/pubmed/20130908
6. Moore R. Recurrent melanosis of the rectum, after previous removal from the verge of the anus, in a managed sixty five. Lancet. 1857; 1: 290.
7. Saraswat B, Purohit R, Singh A, Yadav R. Primary anal malignant melanoma: a case report. Int Surg J. 2015; 2: 304-307.
8. Felz MW, Winburn GB, Kallab AM, Lee JR. Anal melanoma:an aggressive malignancy masquerading as haemorrhoids.South Med J. 2001;94:880-885PubMed:https://www.ncbi.nlm.nih.gov/pubmed/11592745
9. Falch C, Stojadinovic A, Hann-von-Weyhern C, Protic M, Nissan A. Anorectal malignant melanoma: extensive 45 year review and proposal for a novel staging classification. J Am Coll Surg. 2013; 217: 324-335. PubMed: https://www.ncbi.nlm.nih.gov/pubmed/23697834
10. Kelly P, Zagars GK, Cormier JN, Ross MI, Guadagnolo BA. Sphincter sparing local excision and hypofractionated radiation therapy for anorectal melanoma: a 20 year experience. Cancer. 2011; 117: 4747-4755. PubMed: https://www.ncbi.nlm.nih.gov/pubmed/21446049
11. Stefanou A, Nalamati SP. Anorectal melanoma. Clin Colon Rectal Surg. 2011; 24: 171-176.https://www.ncbi.nlm.nih.gov/pubmed/22942799
12. M.S. Brady, J.P. Kavolius, S.H. Quan, Anorectal melanoma. A 64-year experienceat Memorial sloan-kettering cancer center, Dis. Colon Rectum.1995; 38:146e151.
13. C.N. Stoidis, B.G. Spyropoulos, E.P. Misiakos, C.K. Fountzilas, P.P. Paraskeva, C.I. Fotiadis, Diffuse anorectal melanoma; review of the current diagnostic andtreatment aspects based on a case report, World J. Surg. Oncol.2009; 7: 64.
14. Wanebo HJ, Woodruf JM, Farr GH et al, Anorectal Melanoma. Cancer 1981; 47:1891-1900
15. Cooper HS, Patchefsky AS, Marks G Cloacogenic Carcinoma of ano rectim in homosexusal. men: An observation of four cases. Dis Colon Rectum 1979; 22:557558.
16. Cooper, P.H., Mills, S.E. & Allen, M.S. Malignant melanoma of the anus. Dis Colon Rectum 25, 693–703 (1982). https://doi.org/10.1007/BF02629543
17. Chuute DJ, Cousar JB, Mills SE. Anorectal malignant melanoma. Morphological and Immunohistochemical features. Am J Clin Pathol 2006;126:93-100.
18. Weinstock MA. Epidemiology and prognosis of anorectal melanoma. Gasteroenterology 1993; 104:174-178.