

ANORECTAL MELANOMA IN NORTHERN PAKISTAN

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ABSTRACT

Melanoma of the anorectum is a rare malignancy. At Armed Forces Institute of Pathology (AFIP), 11 cases were diagnosed over a 10 year period (1981-1990) constituting 14.2% of all primary malignant melanomas. The anorectum was the commonest site for noncutaneous melanomas (45.8%). The age group commonly affected was the fifth to seventh decade (72.7%). Most of the tumours were extensive involving both anal canal and rectum. The proportion of anorectal melanoma is much higher in our study as compared to western reports (0.4-1.6%). The distribution of noncutaneous melanomas in our population also differs, with a relatively lower proportion of ocular melanomas (33.3%) which are the commonest (80%) in western studies (JPMA 42: 155, 1992).

INTRODUCTION

Malignant melanoma of the skin is a common tumour in light skinned races but the anorectal region is a rare site for this malignancy. Different series have reported it to constitute 0.4- 1.6% of all malignant melanomas^{1,2}. These tumours are usually diagnosed late and have a poor prognosis. This study is based on a review of all cases of malignant melanoma reported at AFIP Rawalpindi over a ten year period. The aim was to document the relatively increased frequency of anorectal melanoma in our population.

MATERIAL AND METHODS

Armed Forces Institute of Pathology, Rawalpindi receives surgical material, not only from armed forces - hospitals in Pakistan but also from civilian hospitals situated in northern Punjab and North West Frontier Province. All cases of malignant melanoma reported from 1981-1990 were reviewed. All cases having a non-cutaneous origin were documented. The clinical and morphological features of cases of anorectal melanomas were studied. Original papers, slides and paraffin blocks were available for all cases. Routine hematoxylin and eosin staining was employed in all cases. Special stains including S-100 and melanin were also done whenever required.

RESULTS

The total malignant tumours diagnosed at AFIP from 1981-1990 amounted to 16,045 out of which 77 cases (0.48%) were of primary malignant melanoma. The total number of anorectal malignancies during this period was 397 out of which 11(2.5%) were malignant melanomas.

Site of origin

The anorectal region was the commonest site for primary malignant melanoma, after excluding those of cutaneous origin. Anorectal melanomas accounted for 14.2% all primary, 45.8% of noncutaneous melanomas. Ocular melanomas comprised the third largest group making up 10.4% of all and 33.3% of noncutaneous melanomas.

Age

The predominantly affected age group was the fifth to seventh decade accounting for eight cases (72.7%). The age range was from 26-70 years.

Sex

Seven cases of anorectal melanoma occurred in males and four cases in females with a male to female ratio of 1.75:1.

Clinical presentation

All the cases presented with bleeding per rectum and painful defecation. The duration of symptoms was from two weeks to ten months. Proctoscopic examination revealed an obvious growth in all cases (Figure).

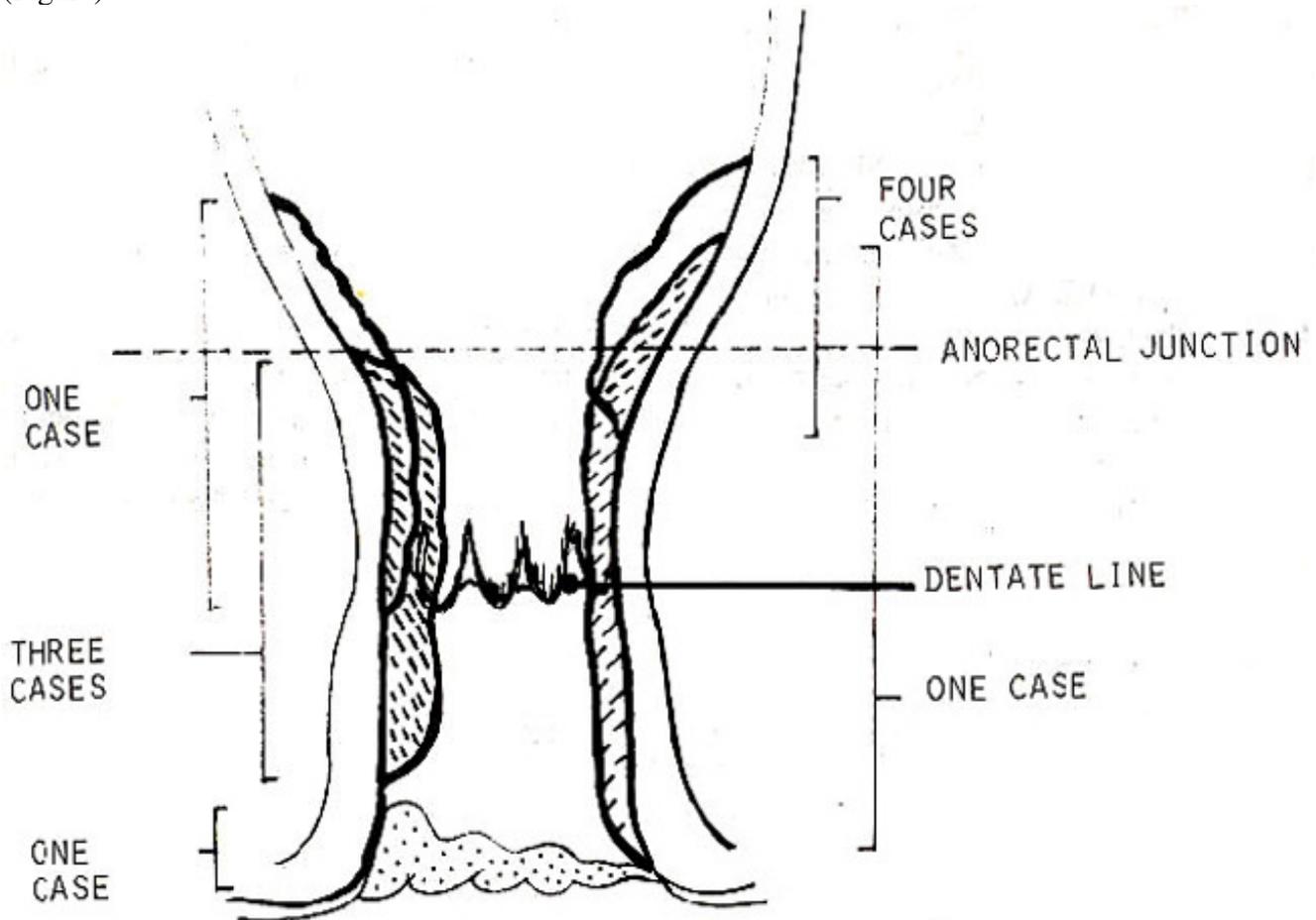


Figure. Site and extent of tumour in ten cases of anorectal melanoma.

In five patients the tumour was in the form of a mass 6-8 cms. in greatest diameter situated in the rectum. Four of these were extending upto the anorectal junction and one to the dentate line. In three cases the main tumour was located in the anal canal extending upto the rectum. In one case there was a hard annular growth in the rectum extending to the anal verge which was swollen and hard. In another case there was a fungating growth in the anal canal. No details were available about the exact site and morphology in one case. Four cases had distant metastases at the time of diagnosis and in one there was regional lymph node involvement.

Gross examination

Ten of the specimens received were rectal biopsies and abdominoperineal resection was performed in only one case.

Microscopic examination

The tumours were highly invasive in all cases. In ten cases the tumour cells were round to polygonal in shape with moderate amount of cytoplasm. One tumour had spindle shaped cells. The nuclei were vesicular with coarse chromatin and prominent nucleoli. Mitotic figures were frequent. Melanin pigment was easily detected in nine cases. In the remaining two cases S-100 staining was done to

clinch the diagnosis.

DISCUSSION

Anorectal malignant melanoma was first reported by Moore in 1857. Since then only a few series have been reported including all together about 400 cases^{3,4}. Morson from St. Mark's Hospital London reported fifteen cases over a period of 22 years. Wanebo et al described thirty-six cases in 1981¹. Anorectal melanoma occurs with a frequency of 0.4-1.6% of all melanomas^{2,6}. A study in 1976 from the National Cancer Institute reviewed the occurrence of noncutaneous melanomas in the United States⁷. The anorectal region accounted for 2.3% of all noncutaneous melanomas. Noncutaneous melanomas as a whole constituted 15% of all melanomas. In our study anorectal melanomas accounted for 14.2% of all melanomas and 45.8% of noncutaneous melanomas. Noncutaneous melanomas as a whole made up 31.1% of all primary melanomas. This pattern differs from the one reported in the above study, one explanation for which may be the low incidence of cutaneous malignant melanoma in dark skinned populations. However even the proportion of noncutaneous melanomas made up by those of the anorectal region is very high. The National Cancer Institute study has shown ocular melanomas to be the commonest (80%) melanomas of noncutaneous origin, whereas in our study they constituted the third largest group (33.3%). Although isolated case reports of anorectal melanoma in the non-Caucasian populations have been published, such a pattern has not yet been reported⁸⁻¹⁰. A similar distribution has however been found in the South-western American Indian population by Black and Wiggin¹¹. This population also has a very low incidence of skin cancer. In their study two cases out of a total of eighteen were from the anal mucosa (27.7%). It is very curious that another rare malignancy, carcinoma of the gall bladder which is relatively common in our material^{12,13}, is also quite common in the above population¹⁴. It is possible that the southwestern American Indians share with our population some undetermined genetic or environmental influence. The anal canal is the third most common site of malignant melanoma¹⁵. The origin of this malignancy from the rectal mucosa is still disputed. One prevailing theory is that it actually represents extension of tumour from anal melanocytes^{4,5}. The reason for this assumption is the absence of the associated junctional changes and the inability to demonstrate melanocytes in the rectal mucosa. However a recent case report by Werdin and associates¹⁶ supports the origin of primary rectal malignant melanoma from melanocytes located within columnar epithelium. Five of our cases also appeared to arise from the rectum but the tumour was extending to the anorectal junction so it was not possible to determine the exact site of origin. All our patients presented with advanced disease and metastasis were present in five cases. Radical surgery was carried out in one case only. It is quite likely that the remaining tumours were inoperable although the exact reasons are not available. It is concluded that anorectal melanomas are not as rare a malignancy in our population as in other populations. If similar frequency rates are documented in other non-Caucasian races, this may provide new ground for research into the cellular origin of this malignancy.

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