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LYMPHOMA OF ANAL CANAL - A CASE REPORT AND THE ROLE OF IMMUNOHISTOCHEMISTRY

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Abstract : Lymphomas of the alimentary canal are rare presentations with only 10 of documented cases so far.Moreover even though rectum is the common site of occurance , lymphoma of anal canal can occur . In this article we discuss our case which presented with anal growth. Initial histological picture was complicated as the growth was not differentiated. Immunohistochemistry was used which gave a clear picture of T-cell lymphoma which on itself is a very rare entity in anal canal.

Keyword : Lymphoma , T- cell type , Immunohistochemistry , Histopathology

CASE REPORT

A 56 yr old male patient presented with complaints of bleeding per rectum for 6 months and mass in anal canal for past 3 months .Mass progressively increased in size causing difficulty in passing stool Patient was ill built and under nourished. No history of fever,pruritus or other constitutional symptoms were present. No generalized lymphadenopathy
No Organomegaly / mass in abdomen

Digital rectal exam : 1) mass felt at 7'0 clock position size of 1x 1cm at anocutaneous junction 2) ulcerative growth involving 2/3rd of circumference of anal canal which bleeds on touch 3 cm from anal verge

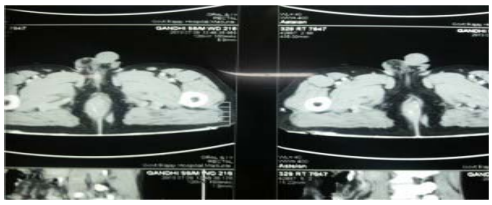
PER RECTAL - MASS

All Basic investigations – normal limits
LFT – Normal
ELISA HIV 1/2 – non reactive
CXR – No Significant Abnormality
USG abdomen and pelvis – No Significant Abnormality

CECT

Irregular circumferential wall thickening of entire anal canal noted (Ant. Wall – 1.1cm, Post wall – 2.8cm) , involving length of 7cm and involvement of distal rectum noted. No evidence of perirectal plane obliteration No evidence of significant lymph adenopathy . Perianal region – mass lesion size 1.5 x 1.5 cm – s/o subcutaneous infiltration . Other solid organs normal /No ascites
Impression – **GROWTH INVOLVING ANAL CANAL AND DISTAL RECTUM WITH SUBCUTANEOUS INFILTRATION**

FILLING DEFECT WITH NARROWING



ANAL GROWTH WITH SUBCUTANEOUS INFILTRATION
COLONOSCOPY

Shows ulcerative lesion in the anal canal for a length of 4 cm from the anal verge, occupying ½ of circumference of anal canal Multiple biopsy taken . Mucosa of Rectum and remaining large bowel – normal. **Impression** – CA ANAL CANAL **HPE** -Sections shows areas of necrosis, hemorrhage and sheets of cells with nuclear pleomorphism and hyperchromatism admixed with monotonous population of lymphocytes. S/O Malignancy.
REPEAT – BIOPSY : Features of poorly differentiated carcinoma / lymphoma Suggested IHC for confirmation

IMMUNOHISTOCHEMISTRY

CYTO KERATIN – NEGATIVE
CD3 – POSITIVE
CD20 – OCCASIONAL B LYMPHOCYTES POSITIVE
KI 67 – POSITIVE, 15 – 20%
CD4 – NEGATIVE
CD8 – FEW CELLS POSITIVE
CD43 – POSITIVE

SUGGESTIVE OF NON HODGKIN'S LYMPHOMA – T CELL PHENOTYPE MANAGEMENT :

Case referred to Medical Oncologist . CHOP Regimen started- (cyclophosphamide,hydroxy doxorubicin, vincristine (Oncovin), Prednisone) . Follow up – After 2 cycle of chemo - mass reduced symptomatically free

DISCUSSION

Connective tissue sarcomas, such as leiomyosarcoma, rhabdomyosarcoma, and myoblastoma, are rare in the anal canal. **Lymphoma of the anus is unusual**. Carcinoid tumors can occasionally originate from anal canal endocrine cells, and APR may be required, especially for those exceeding 2 cm in size Colorectal Lymphoma is uncommon that occurs in 0.4% of patients with intestinal lymphoma Almost Non Hodgkins Lymphoma– B Cell Type .Anorectum is a rare site for lymphoma. Even for AIDS assosiated lymphoma the involvement of anorectum is rare in usually B-cell lymphoma is common. The pathology involves the lymphoid aggregates present beneath theanal mucosal membrane and in the intersphinteric region. It can present as a ulcero proliferative/ annular lesion. The cause of most cases of NHL is unknown, although several genetic diseases, environmental agents, and infectious agents have been associated with the development of lymphoma. Although the existence of a familial NHL risk is debated, familial aggregations of NHL have been described, and some studies have shown a higher risk of NHL in siblings or first-degree relatives of people with lymphoma or other hematologic malignancies. (6) Several rare inherited immunodeficiency states are associated with as much as a 25% risk of developing lymphoma. (7) These disorders include severe combined immunodeficiency, hypogammaglobulinemia, common variable immunodeficiency, Wiskott-Aldrich syndrome, and ataxia-telangiectasia. Lymphomas associated with these disorders are often associated with EpsteinBarr virus (EBV) and vary in appearance from initial polyclonal B-cell hyperplasia to monoclonal lymphomas. (7) Lymphoma in the large bowel accounts for about 10% of all gastrointestinal lymphomas,(2) but although the rectum is the commonest site within the large bowel, no series has described primary anal disease.

The patient in this report appears to have had anal lymphoma as the case satisfied criteria for primary gastrointestinal lymphoma.(4)Palpable lymphadenopathy and enlargement of lymph nodes were absent, total and differential white cell counts were normal, and although laparotomy was not performed, computed tomography did not detect further intra-abdominal disease. The presentation of primary lymphoma as anal tumor is interesting in view of the recent description of lymphoma arising from lymphoid tissue associated with mucous membranes.(5) Lymphoid tissue in the anal canal is aggregated around the anal glands in the intersphincteric plane, and mucosa of anal canal. Specialized lymphoid tissue is found in gastrointestinal tract (gut-associated lymphoid tissue: Peyer's patches of the distal ileum, mucosa! lymphoid aggregates in the colon and rectum) have prominent B-cell follicles with broad marginal zones but also may have discrete T-cell zones Initial histological diagnosis was complicated by the undifferentiated nature of this tumour, and only after immunohistochemical staining with monoclonal antibodies could lymphoma be diagnosed definitely. (1)In the World Health Organization (WH O) approach to classification, all available information-morphology, immunophenotype, genetic features, and clinical features-are used to define a disease entity. The relative importance of each of these features varies among diseases. Morphology is always important, and some diseases are primarily defined by morphology, with immunophenotype as backup in difficult cases. Some diseases have a virtually specific immunophenotype, such that one would hesitate to make the diagnosis in the absence of the immunophenotype This highlights the importance of such studies in poorly differentiated neoplasia, and some anal tumours reported as anaplastic carcinoma on purely histological grounds might, in fact, be lymphomas. Clearly, it is important to distinguish between carcinoma and lymphoma, and we would urge the use of immunohistochemical studies when the histogenesis of any anal tumour is in doubt. **Our patient presented** with symptoms typical of anorectal carcinoma and the physical findings directed towards a squamous type of carcinoma which is usual in anal canal. The patient did not have anysexual contact history and he was sero-negative for Human Immuno Deficiency virus. There was also no palpable significant lymphnode enlargement or hepatosplenomegaly even in abdominal C.T. There was also no constitutional symptoms like fever , pruritus , night sweats etc. Thus these factors were against the diagnosis of lymphoma. Histopathology was not confirmatory and gave a picture of poorly differentiated carcinoma / lymphoma. Hence the subsequently done IHC revealed the markers for **LYMPHOMA** that too **TCELL type** which is **very rare** in gastro intestinal tract. Patient was symptom free with chemotherapy.

CONCLUSION: Thus from our case we conclude that Lymphoma of anal canal though rare can present as an innocuous growth. We were able to avoid a colostomy and APR resection and unwarranted radiation due to the advent of Immunohistochemistry. The histology can be equivocal and under / mis diagnosing the lesion as a anaplastic / poorly differentiated carcinoma is not uncomman and hence Immunohistochemistry should be recommended anytime when the diagnosis id in doubt.

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