CASE STUDY OF A RARE CASE OF NODULAR HIDRADENOMA OF THE FINGER

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***Abstract*-** Nodular Hidradenoma, also known as solid-cystic or clear cell Hidradenoma or acrospiroma, is a benign adnexal tumor that arises from the distal excretory duct of eccrine sweat glands. The lesion can occur anywhere on the body e.g axilla, face, arms, thighs, trunk, scalp and pubic region but the most common site is head. Our patient was a 37 year old male, a K/c/o PLHIV since 2 years on ART presenting with a recurrent nodular hidradenoma of the 5th digit of his right hand. A Ray's amputation of the 5th digit was performed. The patient is currently asymptomatic at the 3rd post-operative month.

***Index Terms*-** Acrospiroma, Adnexal tumor, Hidradenoma, Nodular

I. INTRODUCTION

Nodular Hidradenoma(a.k.a. solid-cystic or clear cell Hidradenoma or **acrospiroma)** is a benign adnexal tumor that arises from the distal excretory duct of eccrine sweat glands. It usually presents as slowly enlarging, solitary, freely movable nodule, solid or cystic, measuring on an average 0.5-2cm in diameter, but may reach 6.0cm or more. The lesion is hypothesised to occur anywhere on the body e.g. axilla, face, arms, thighs, trunk, scalp and pubic region but the most common site is head[(1,2)]. The tumour is most commonly seen involving the trunk with distal extremity involvement extremely rare. Most commonly it is seen in the age group of 20-50 years and is rare in children.It occurs twice as commonly in women as compared to men. Though traditionally considered a benign tumour, recent reports of malignant transformation have also been reported[(13)].

II. CASE STUDY

Our patient was a 37 year old male, a K/c/o HIV since 2 years on Anti-Retroviral Therapy. He presented with a nodular swelling over the proximal inter-phalangeal joint of his right 5th digit since 1 year. Patient gave h/o 2 surgeries in the past 4 months and 10 months back for the same condition followed by recurrence. He also complained of pain at the site since the last 15 days. Local examination showed a 4 by 3 cm firm tender mass over the proximal inter-phalangeal joint with absent mobility over the phalangeal joints and deformity of the digit. Skin involvement in form of thinning, tenseness and redness were seen with skin fixity to the underlying mass. Digital movements of the 5th digit were completely lost. Histopathology report of a previous excision done 4 months back was s/o nodular hidradenoma. In view of recurrence, loss of functionality of digit, skin involvement and severe tenderness only partially responsive to analgesics, a decision to amputate the digit was taken after informed consent. Thus a Rays amputation with primary closure of the digit was performed. Histopathology report of the specimen confirmed the diagnosis of Nodular Hidradenoma with local infiltration.

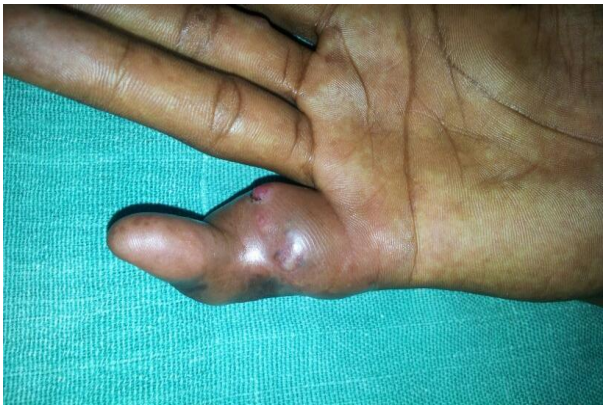

Figure 1 gross appearance

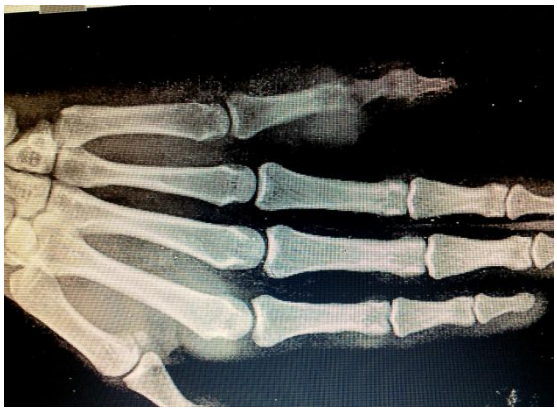

Figure 2Skiagram of Hand

III. DISCUSSION

Sweat gland neoplasms are extremely rare neoplasms. They can be classified into benign and malignant variety. The benign variety have been sub divided into subtypes such as nodular, apocrine and clear cell based on their histo-pathological presentation. The malignant form or Sweat gland carcinomas are those that possess an infiltrative and/or metastatic potential. They are generally classified into two groups. The first group comprises malignant tumours that closely mimic their benign counterparts while tumours in the second group do not have a benign counterpart. Behboudi et al, performed Immuno-histochemical analysis of these neoplasia, majority have shown dna changes in the form of **t(11;19)(q21;p13)** translocations resulting in ***MECT1/MAML2***. This change is similar to that seen in Warthin's tumour(6).

Nodular hidradenomas are usually seen in third to fifth decade of life and are twice more common in females.(2)Clinically the tumour usually presents as an asymptomatic, solitary, 0.5 to 6 cm sized, skin coloured intra-dermal nodule, slightly elevated above the surrounding skin.(1,2)Occasionally brown, blue or red discoloration and surface erosions or ulceration may be observed. It is a slow growing tumour and rapid growth may represent trauma, haemorrhage or a malignant change.(2-5)

Differentiation depends upon biopsy and immune-histochemical staining.(8)Histopathology shows both solid and cystic components in varying proportions. The tumour has tubular lumina lined by cuboidal or columnar cells and variably sized cystic spaces. The solid portions contain two types of cells: polyhedral cells with basophilic cytoplasm and glycogen containing pale or clear cells with a clear cytoplasm and a round nucleus.(7)The histology of malignant hidradenoma resembles that of its benign counterpart. The criteria for malignancy include poor circumscription, presence of nuclear atypia and mitotic activity, predominantly solid cell islands, infiltrative growth pattern, areas of necrosis and angio-lymphatic permeation(8),(10),(11). Nodular hidradenoma is labeled as atypical when there is no evidence of invasive features but it has a high mitotic rate or nuclear atypia. The exact frequency of Nodular hidradenoma and their risk of transformation into malignant tumors is not known. However, mitotic activity and cellular pleomorphism may not be accurate predictors of clinical behaviour. Malignant hidradenocarcinoma are usually known to arise de novo and malignant transformation of benign nodular hidradenoma has rarely been reported.(3)

Clinical differential diagnosis includes basal cell and squamous cell carcinoma, melanoma, metastatic tumor, dermatofibroma, pyogenic granulomas, heamngioma, leiomyoma and other cutaneous adnexal tumors.(1,2).

Treatment of benign, atypical and malignant nodular hidradenoma is surgical excision with adequate margins to minimize the risk of recurrence followed by histologic confirmation of adequacy of excision.(12)

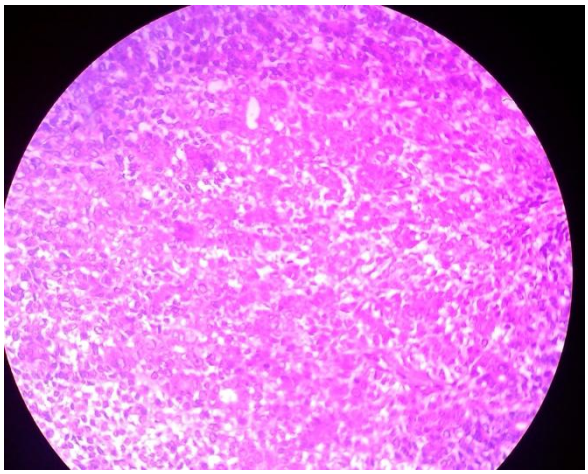

Figure 3 view under 100X microscope

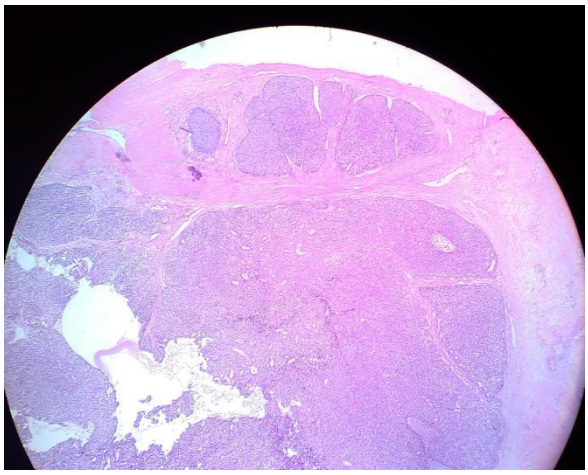

Figure 4 view under 10X microscope

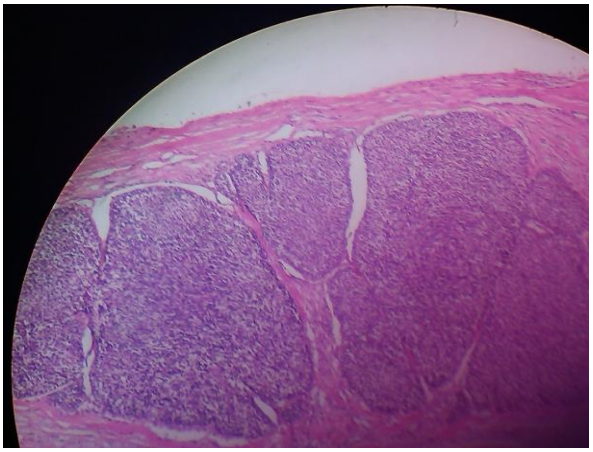

Figure 5 view under 40X microscope

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