Original Research Paper

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Orthopaedics

NODULAR HIDRADENOMA OF THUMB: A RARE CASE REPORT

Dr Smit Vadher	1st year resident doctor, Institution- SBKSMIRC, Sumandeep Vidyapeeth
Dr Anirudh bansal*	3rd year resident doctor, Institution- SBKSMIRC, Sumandeep Vidyapeeth *Corresponding Author
Dr Arvind kumar	Associate professor and Unit Chief, Institution- SBKSMIRC, Sumandeep Vidyapeeth
Dr Sudhir Rawat	Assistant Professor, Institution- SBKSMIRC, Sumandeep Vidyapeeth
Dr Vikramjit Singh	3rd year resident doctor, Institution- SBKSMIRC, Sumandeep Vidyapeeth

KEYWORDS: Nodular Hidradenoma, Rare Tumor Of Extremity

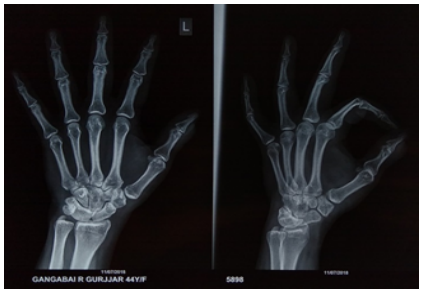
INTRODUCTION

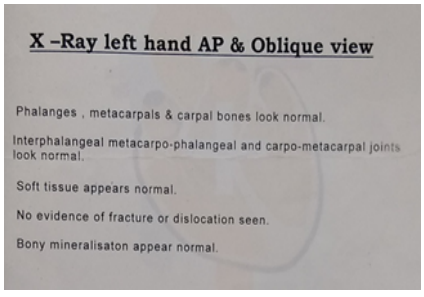
Nodular Hidradenoma (solid-cystic or clear cell hidradenoma or acrospiroma) is a benign adnexal tumour that arises from the distal excretory duct of eccrine sweat glands. Most common presenting feature is a slowly enlarging, solitary, mobile nodule, can be solid or cystic, with size upto 6 cm. The lesion is said to occur anywhere on the body e.g. scalp, face, arms, axilla, trunk, thighs and pubic region but the most common site is head. The tumour is most commonly seen involving the trunk with distal extremity involvement extremely rare. The incidence is more in 20-50 years of age and is seen rarely in children. Females are more affected than males. Although it is said to be a benign tumour malignant transformation is being reported nowadays.

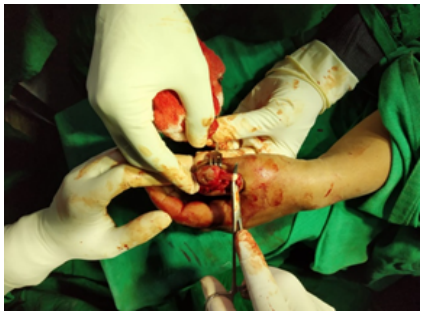
CASE REPORT

A 44 year old female presented with history of a painless swelling over her left thumb for 5 years. The swelling gradually progressed in size for 5 years then had rapid progression in size and pain over past 6 months. Local examination revealed a 2.5 cm x 1 cm tender mass over proximal phalanx of left thumb. The mass was mobile, non-pulsatile, non-compressible, non-reducible and no bruit was heard on auscultation. Skin involvement in form of thinning and redness were seen with skin fixity to the underlying mass. Digital movements of thumb were intact.

Excision of mass was done in a planned OT. The mass was non-pulsatile, non-compressible attached to the extensor pollicis longus tendon. The mass was sent for histo-pathological examination after which it was known to be a nodular hidradenoma.







Intra-Op

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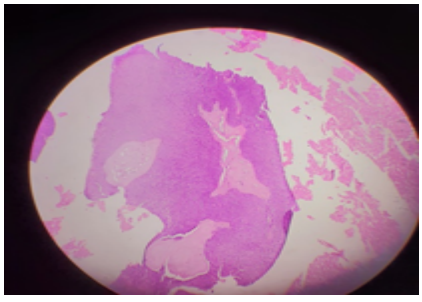

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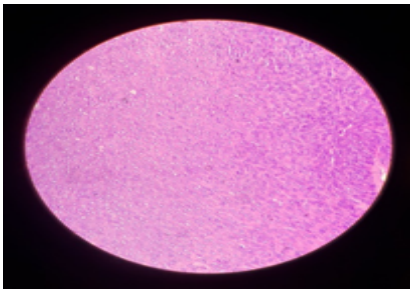

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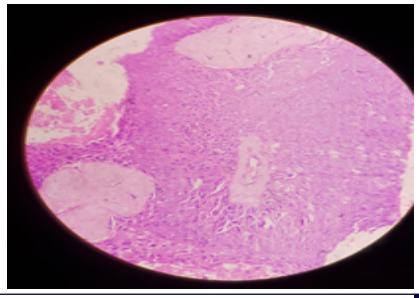
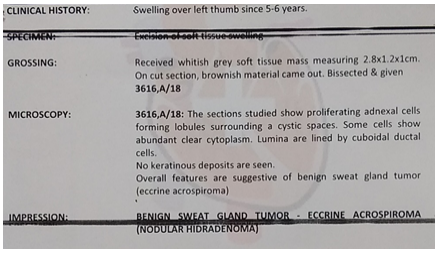
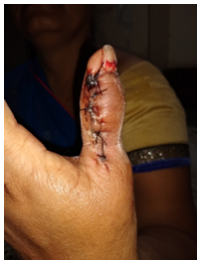


HISTOPATHOLOGY REPORT

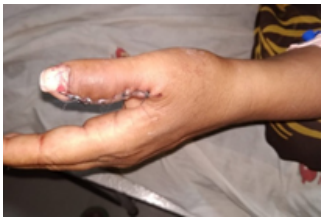


CLINICAL HISTORY:	Swelling over left thumb since 5-6 years.
SPECIMEN:	Excision of soft tissue swelling
GROSSING:	Received whitish grey soft tissue mass measuring 2.8x1.2x1cm. On cut section, brownish material came out. Bissected & given **3616,A/18**
MICROSCOPY:	**3616,A/18:** The sections studied show proliferating adnexal cells forming lobules surrounding a cystic spaces. Some cells show abundant clear cytoplasm. Lumina are lined by cuboidal ductal cells. No keratinous deposits are seen. Overall features are suggestive of benign sweat gland tumor (eccrine acrospiroma)
IMPRESSION:	BENIGN SWEAT GLAND TUMOR - ECCRINE ACROSPIROMA (NODULAR HIDRADENOMA)

POD 2

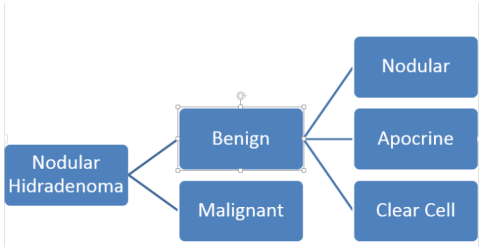


POD 5



DISCUSSION

Nodular hidradenoma is extremely rare neoplasms which is classified into benign and malignant.



Behboudi et al, performed Immuno-histochemical analysis on these tumour and he suggested 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 seen in second to fifth decade and are more common in female gender[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]

Biopsy and immune-histochemical staining are used to differentiate the tumour[8]. Histopathology is used to show both solid and cystic components in varying proportions. The tumour is usually lined by cuboidal or columnar cells with 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 with 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].

Atypical variety is labelled 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 tumours is not known as malignant transformation of benign nodular hidradenoma is rarely reported[3].

Differential diagnosis of these features are Basal cell and Squamous cell carcinoma, Melanoma, Dermatofibroma, Pyogenic granuloma, Hemangioma, Leiomyoma and other cutaneous adnexal tumours [1,2]

Treatment of benign, atypical and malignant nodular hidradenoma is surgical excision primarily with adequate excision of margins to minimize the risk of recurrence. Histopathology and frozen section are required to identify the margin of excision and further management [12]

Conclusion

Nodular Hidradenoma of digits is a rare occurrence. Excision and Marginal resection gave us an excellent result. No recurrence was reported on 6 monthly follow-up.

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