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MULTIPLE CUTANEOUS PILAR LEIOMYOMAS : A CASE REPORT

Pathology

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ABSTRACT

Piloleiomyoma is the most common type of smooth muscle tumor of the skin. It can occur alone or as part of an inherited condition and may be associated with internal malignancies when multiple lesions are present. We report a case of a 35-year-old female with multiple swellings over the back for five years. Excision biopsy showed a well-defined benign smooth muscle tumor arising from the arrector pili muscle, without atypia. A diagnosis of pilar leiomyoma was made. Identification of multiple piloleiomyomas is important, as further evaluation may be required to rule out associated syndromic conditions.

KEYWORDS

Cutaneous Leiomyoma, Piloleiomyoma, Leiomyomatosis.

INTRODUCTION

Piloleiomyomas are commonest of the cutaneous leiomyomas. These can be sporadic or inherited. Presence of multiple cutaneous piloleiomyomas is a cause for further work up due to association of multiple malignancies.[1-3]

Case Report

History: 35year old female complaining of multiple swellings over back since 5years. Excisional biopsy from one of the swellings was sent to histopathological examination in department of Pathology, Government Medical College Bhavnagar

Gross Examination: The received specimen was single skin covered tissue measuring (1.3x0.6x0.5 cm) in size. Cut surface showed a (0.5x0.5 cm) sized whitish, round, firm area in the dermis. Whole tissue was processed.

Method: The excised biopsy specimen was studied microscopically after standardized tissue processing and H & E staining.

Microscopy: Sections showed skin with underlying dermis displaying a fairly circumscribed tumor in the mid dermal plane arising from arrector pilar muscle, comprising sheets and short interlacing fascicles of spindle cells with cigar shaped bland nuclei and eosinophilic cytoplasm. There was no nuclear hyperchromasia, increase in cellularity, mitosis or necrosis. The adjacent dermis showed few eccrine ducts and sebaceous unit. Tumor lied 3mm and 2 mm away from lateral margin and base of resection respectively. Histo-morphological diagnosis of pilar leiomyoma was made. Immuno-histochemistry for fumarate-hydratase and 2-succinyle cysteine and abdominal Imaging was advised to rule out the possibility of HLRCC syndrome.

DISCUSSION

Pilar leiomyoma is a benign smooth muscle tumor arising from the arrector pilli muscle associated with the hair follicles of the skin.[1]

There are 3 subtypes of cutaneous leiomyomas with different origins and histopathologic features: piloleiomyoma, genital leiomyoma, and angioleiomyoma.[1,2]

Pilar leiomyoma is the most common subtype. Some genodermatoses are characterized by the development of visceral tumors and cutaneous leiomyomatosis such as Reed's syndrome and hereditary leiomyomatosis and renal cell cancer (HLRCC).[1,3]

HLRCC is an autosomal-dominant inherited renal cancer syndrome. It is caused by heterozygous mutations in the FH gene that encodes an enzyme involved in the Krebs cycle, which catalyzes the conversion of fumarate to malate.[3,4] Presence of multiple cutaneous pilar leiomyoma warrants further work up to look for RCCs, cutaneous LMS & uterine LMS.[1,3]

Differential diagnosis include other spindle cell tumors of which neurofibromatosis, dermatofibroma and schwannoma are common.[1,2]

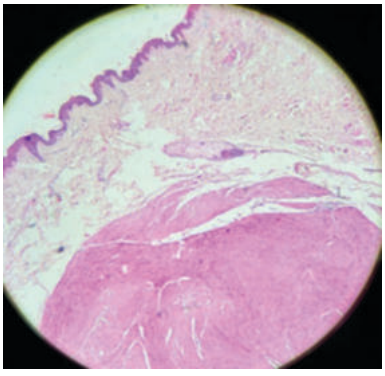

Figure 1:(4x) H & E Well Circumscribed Dermal Tumor

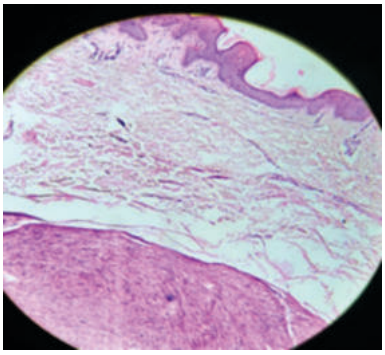

Figure 2:(10x)H & E Well Circumscribed Dermal Tumor

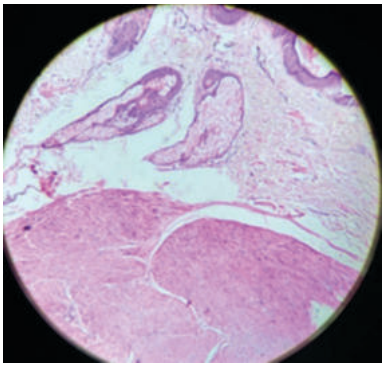

Figure 3:(10x) H & E Tumor with Fascicles of Smooth Muscle Bundles with Surrounding Sebaceous Glands

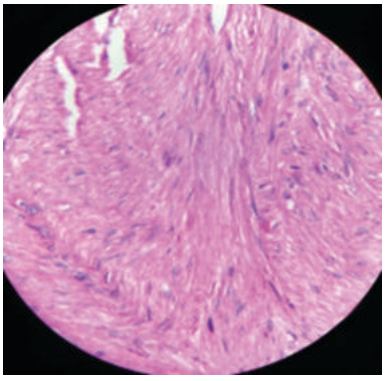

Figure 4:(40x) H & E Tumor with Fascicles of Smooth Muscle Bundles with Surrounding Sebaceous Glands

CONCLUSIONS

Syndromic association of multiple pilar leiomyomas makes it important to know this entity, its differential diagnosis, and the molecular work up for better patient care and treatment.

REFERENCES

1. Malik K, Patel P, Chen J, Khachemoune A. Leiomyoma cutis: a focused review on presentation, management, and association with malignancy. Am J Clin Dermatol. 2015 Feb;16(1):35–46. doi:10.1007/s40257-015-0112-1. PMID:25605645.
2. Boyuk E, Saracoğlu ZN, Arık D. Cutaneous leiomyoma mimicking a keloid. Acta Dermatovenerol Croat. 2020 Aug;28(2):116. PMID:32876039.
3. Natália F, Tiago O, Pedro O, Sandro G. Hereditary leiomyomatosis and renal cell carcinoma: case report and review of the literature. Urol Ann. 2018 Jan–Mar;10(1): 108–110. doi:10.4103/UA.UA_95_17. PMID:29416287; PMCID: PMC5791447.
4. Toro JR, Nickerson ML, Wei MH, et al. Mutations in the fumarate hydratase gene cause hereditary leiomyomatosis and renal cell cancer in families in North America. Am J Hum Genet. 2003;73(1):95–106. doi:10.1086/376435.