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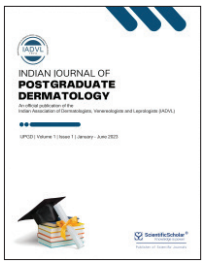

Letter to Editor

Malignant Transformation of Facial Nevus Sebaceous – Unrelated with Size

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Dear Editor,

A 34-year-old male presented with swelling for 6 months and came for cosmetic reasons. He initially noted a skin-coloured swelling from childhood which increased in size over the past 6 months. Examination revealed a solitary 4-mm skin-coloured non-tender papule in the left nasolabial fold with telangiectasias surrounding the lesion, over the nose, chin and bilateral malar prominence [Figure 1]. Dermoscopy showed yellowish globules with central brown globules and surrounding branched and reticular vessels [Figure 2]. An excisional biopsy was done with the differentials of sebaceous hyperplasia and appendageal tumours such as sebaceoma, trichoepithelioma, trichofolliculoma. H&E stain of skin biopsy showed epidermis and dermis with the marked proliferation of sebaceous glands, with many of the sebaceous ducts being superficially located and not associated with hair follicles. Furthermore, a small area of basaloid cell islands with surrounding retraction artefacts was noted in the form of clear spaces in the superficial dermis. These basaloid tumour cell islands showed mild-to-moderate membranous positivity for BerEP4. Epithelial membrane antigen (EMA) immune stain was negative in basaloid tumour cell islands but highlighted sebaceous glands. Melan-A immunostain was negative in basaloid tumour cell islands

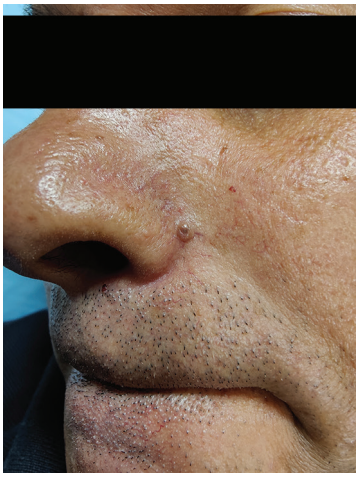

Figure 1: Clinical image – skin-coloured papule of 4 mm in size in the nasolabial fold with telangiectasias surrounding the lesion.

[Figure 3a-e]. Diagnosis of nevus sebaceous (NS) with basal cell carcinoma (BCC) was given based on histopathology.

NS also known as nevus sebaceum of Jadassohn is a common congenital hamartoma of the skin. First described in 1895, and its prevalence is <1%. The lesions may be linear, round, oval or irregularly shaped and generally asymptomatic.[1] 95% of lesions are in the head-and-neck region with scalp lesions associated with alopecia. 23.5% of NS is limited to the face region.[2] NS progresses in three phases. The first phase is in infancy and childhood characterised by underdevelopment of the hairs and sebaceous glands with quiescent waxy yellow, flat or mammillated plaque. The second phase is characterised by massive development of sebaceous glands, with elevated, verrucous or nodular appearance and histologically as hypertrophic sebaceous glands with papillomatosis and hyperkeratosis of the overlying epidermis. This phase usually begins in puberty. The third stage is in late adult life complicated by the development of benign or malignant tumours from the existing NS.[3]

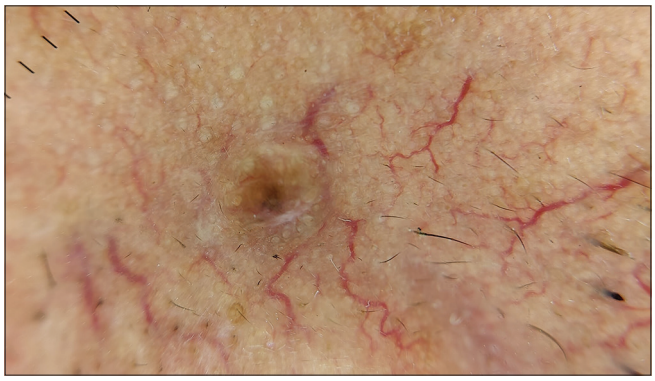

Figure 2: Dermoscopy of the lesion – yellowish globules with central brown globule and surrounding branched and reticular vessels (Dermlite 4).

NS is known for neoplastic changes (3%); however, no specific correlation is available with age, duration or size of the lesion.[2] The most frequent tumours arising from NS are trichoblastoma (34.7%), syringocystadenoma papilliferum (24.7%), apocrine adenoma (10%) and trichilemmoma (5.3%). The incidence of BCC in NS is rare and varies from 0.8% to 1.1%.[4] The pathophysiology of BCC involves the tumour suppressor gene, patched gene (*PTCH*) and the sonic hedgehog signal transduction pathway. NS has been linked to heterozygosity loss at 9q22.3, the patched locus. NS may proceed to BCC as a result of this molecular genetics.[5] Very rarely multiple tumours are observed within one pre-existing lesion.

Dermoscopy of NS varies with the evolution of the disease and it includes yellowish/brown globules, yellowish homogenous appearance and linear irregular or arborescent vessels.[6] Dermoscopic features of BCC are blue–grey ovoid nests, blue–grey globules, maple leaf-like areas, spoke wheel structures, ulceration and arborising vessels.[7]

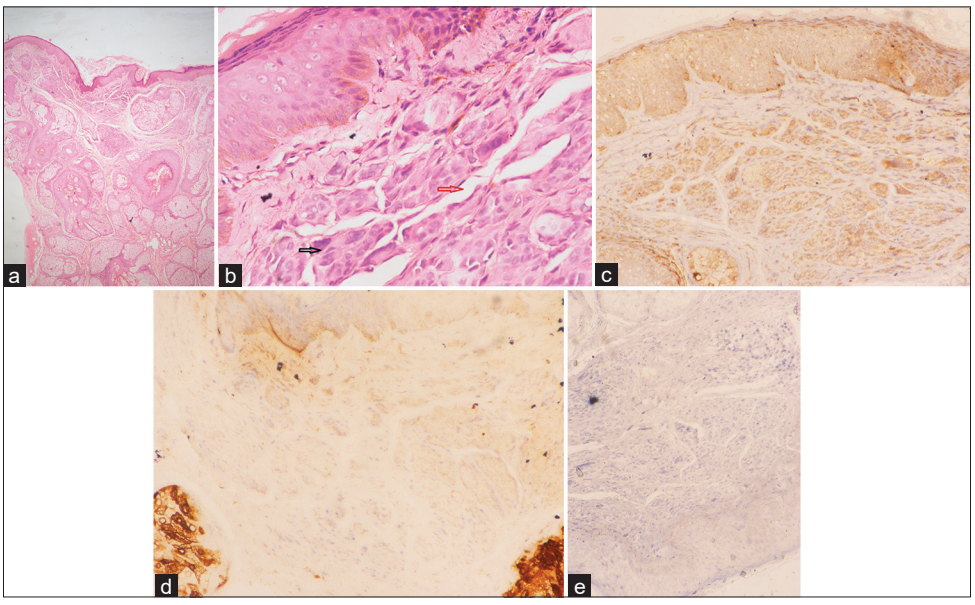

Figure 3: Photomicrographs of skin biopsy. (a) Photomicrograph of skin biopsy showing epidermis and dermis with marked proliferation of sebaceous glands, many of the sebaceous ducts are superficially located and not associated with hair follicles (Haematoxylin and Eosin (H&E) stain, 10×). (b) A small area in the superficial dermis with the presence of basaloid cell islands (black arrow) with surrounding retraction artefacts was noted in the form of clear spaces (red arrow) (H&E stain, 20×). (c) These basaloid tumour cell islands show mild-to-moderate membranous positivity for BerEP4 [Immunohistochemistry (IHC) stain, 20×]. (d) Epithelial membrane antigen (EMA) immunostain is negative in basaloid tumour cell islands but highlights sebaceous glands (IHC stain, 40×). (e) Melan-A immuno-stain is negative in basaloid tumour cell islands (IHC stain, 20×).

Histopathology of NS varies with the clinical stage and it includes immature sebaceous glands localised to the deeper dermis and reticular dermis in patch and verrucous plaque stage, respectively. Matured sebaceous glands are in the epidermis in the nodular stage.[4] EMA is the immunohistochemistry marker for the sebaceous glands. Key features of BCC histopathology include islands of basaloid tumour in a palisading pattern with retraction clefts between the tumour stroma. BerEP4 is the IHC marker for BCC.

Management of NS remains controversial, and no clear consensus is available. Surgical excision, laser ablation and dermabrasion are the treatment options.[8] Malignant transformation remains a low risk; however, in our case, the lesion was very small, and without any obvious clinical change in the lesion, progressed to BCC diagnosed only with histopathology, which is rare. Close monitoring of the NS lesion is recommended with prophylactic excision and histopathology confirmation which will yield optimal results.

Ethical approval

Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

REFERENCES

1. David K, Alhajj M, Parks J, Aslam R, Sigel J. Basal Cell Carcinoma and Sebaceoma within Nevus Sebaceous of the Scalp. Cureus 2021;13:e18632.
2. Rosen H, Schmidt B, Lam HP, Meara JG, Labow BI. Management of Nevus Sebaceous and the Risk of Basal Cell Carcinoma: An 18-year Review. Pediatr Dermatol 2009;26:676-81.
3. Mehregan AH. Life History of Organoid Nevi: Special Reference to Nevus Sebaceus of Jadassohn. Arch Dermatol 1965;91:574.
4. Idriss MH, Elston DM. Secondary Neoplasms Associated with Nevus Sebaceus of Jadassohn: A Study of 707 Cases. J Am Acad Dermatol 2014;70:332-7.
5. Turner CD, Shea CR, Rosoff PM. Basal Cell Carcinoma Originating from a Nevus Sebaceus on the Scalp of a 7-year-old Boy. J Pediatr Hematol Oncol 2001;23:247-9.
6. Sandhu S, Neema S, Singh PY, Dangwal V, Kothari R. Dermoscopy of Nevus Sebaceus: A Cross-sectional Study of 22 cases. Indian J Dermatol Venereol Leprol 2024;90:367-72.
7. Ungureanu L, Cosgarea I, Şenilă S, Vasilovici A. Role of Dermoscopy in the Assessment of Basal Cell Carcinoma. Front Med (Lausanne) 2021;8:718855.
8. Srivastava D, Taylor RS. Appendage Tumours and Hamartomas of the Skin. In: Goldsmith LA, Katz SI, Gilchrest BA, PallerAS, Leffell DJ, Wolff K, editors. Fitzpatrick's Dermatology in General Medicine. 8th ed. New York: McGraw-Hill Companies, Inc.; 2012. p. 1375-6.

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