



## CUTANEOUS WARTS OVER NEVUS SEBACEOUS: CASE SERIES

## Dermatology

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## ABSTRACT

Nevus sebaceous of Jadassohn (NS) also known as organoid nevus is a hamartoma with epithelial and non-epithelial origins. They commonly occur over the scalp and may also occur over the face or neck. Various skin disorders such as syringocystadenoma papilliferum, syringoma, trichilemmoma, trichoblastoma, BCC and SCC have been reported to be arising from NS and only very few cases with verruca have been reported till date in literature. We report two cases with occurrence of cutaneous warts arising from Nevus sebaceous of Jadassohn.

## KEYWORDS

Nevus sebaceous, Hamartoma, Cutaneous warts

## INTRODUCTION

Nevus sebaceous (NS) is a congenital hamartoma of the pilosebaceous unit.<sup>[1-6]</sup> It was first described by the dermatologist Josef Jadassohn in the year 1895.<sup>[2]</sup> NS displays abnormalities within sebaceous glands, sweat glands, and hair follicles. Approximately around 0.3% of neonates are affected by nevus sebaceous, with no gender predisposition. It affects all races and ethnicities. The exact etiology is unknown, but recent studies point to a possible link of NS with human papilloma virus or mutations in the patched gene (PTCH) or postzygotic somatic mutations of the HRas.<sup>[1,2,4,6]</sup> Usually, NS appears as a solitary circumscribed smooth yellowish orange plaque at birth, which might eventually become a thickened, larger, waxy and greasy nodule during postpuberty. The occurrence of an infectious lesion over an area of cutaneous mosaicism like in Nevus sebaceous is rare.<sup>[7]</sup>

## Case Reports

In the first case, a 23-year-old female presented to our OPD with a single asymptomatic yellowish-brown raised lesion over her right cheek since birth, which has increased in size over past few years. Later she has noticed new growths over the existing lesion in the past 2 months. On examination, there was a solitary well defined yellowish-brown plaque of size 4\*2 cm, within which, two verrucous growths were noted over the right cheek. Patient was advised for skin biopsy, but she was non-compliant. On the basis of clinical findings, a diagnosis of verruca vulgaris over nevus sebaceous was made.

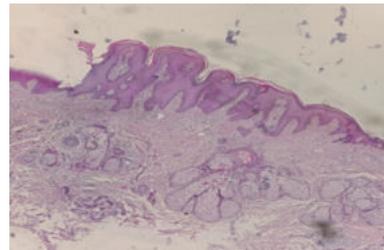


**Fig 1** – solitary well defined yellowish-brown plaque with verrucae over the cheek

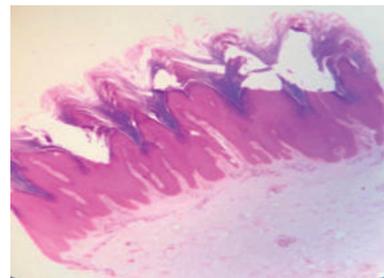
In the second case, a 19-year-old male presented with a single orange brown raised lesion over the scalp since birth, which increased in size in the past 3 months. His mother has noticed a growth arising from the existing lesion since past 2 months. On examination, a solitary well defined orange brown plaque of size 5\*3 cm with a verrucous growth from the lesion is noted over the scalp (Fig 2a). Patient was advised for excision biopsy. Biopsy from the plaque revealed hyperkeratosis, papillomatosis, sebaceous hyperplasia (Fig 2 b) and from the verrucous lesion, findings of hyperkeratosis, parakeratosis, acanthosis, papillomatosis and presence of koilocytes were noted. (Fig 2c)



**Fig 2a** – solitary well defined orange-brown plaque with a verrucous growth over it



**Fig 2b** – Histopathology from the hairless brown plaque suggestive of nevus sebaceous [ H&E staining, x4 magnification]



**Fig 2c** – Histopathology from the verrucous growth revealing findings of wart [ H&E staining, x4 magnification]



**Fig 2d** – Post treatment image of the lesion site

## DISCUSSION

Nevus sebaceous of Jadassohn is a hamartoma containing any or all components (sebaceous glands, ectopic apocrine glands and hair follicles) of the skin, hence the name organoid nevus.<sup>[1-6]</sup> It occurs approximately in about 0.3 percent of new-borns and without any sex predilection. It is usually sporadic, but few familial cases have also been reported. It is thought to be caused by postzygotic mosaic mutations in the HRAS or KRAS genes, but isolated cases with mosaic mutations in NRAS and FGFR2 have also been reported.<sup>[1-3]</sup> Carlson et al. has detected HPV DNA in 82% of nevus sebaceous lesions.<sup>[4,7]</sup> It might represent a commensal infection, due to localized cutaneous predisposition or an essential factor in pathogenesis of nevus sebaceous, exact cause is unknown. Nevus sebaceous occurs in three stages- prepubertal, postpubertal and neoplastic changes. Prepubertal stage is characterized by papillomatous hyperplasia and immature hair follicles. Postpubertal stage is characterized by rapid growth of the nevus due to hormonally driven development of sebaceous glands and maturation of apocrine glands. Eventually, the lesion transforms into a verrucous plaque. Neoplastic changes (both benign and malignant) are seen in the third stage in 10-20% cases.<sup>[5]</sup> Benign tumors arise frequently from NS and amongst them syringocystadenoma papilliferum and trichoblastoma are very common.<sup>[2]</sup> Malignant changes (SCC, BCC) are seen only in less than 5 % of the individuals. Very few case reports with occurrence of verruca over nevus sebaceous have been reported worldwide.<sup>[7]</sup> NS may also be present as a feature of certain genetic syndromes like didymosis aplasticosebacea, SCALP (sebaceous nevus, central nervous system malformations, aplasia cutis congenital limbal dermoid, and pigmented nevus) syndrome.<sup>[2,3,6]</sup> The diagnosis of nevus sebaceous is usually made clinically, but a tissue biopsy should be performed for histologic confirmation and to rule out malignant transformation. Typical histopathologic findings include presence of immature hair follicles; hyperplastic, immature sebaceous glands; dilated apocrine glands; and epidermal hyperplasia. Treatment of nevus sebaceous is full-thickness excision, but, age, extension and location of the lesion, the patient's or parent's concern about the cosmetic appearance and/or risk of malignancy should also be considered. Alternatives to surgical excision include photodynamic therapy, carbon dioxide laser resurfacing, electrocautery and dermabrasion.<sup>[1-6]</sup> This case is being reported as occurrence of warts over nevus sebaceous is rare and very few such cases have been reported in literature so far.

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