

## CASE REPORT



# A case of giant hairy pigmented nevus of face – A case report

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### Abstract

The prophylactic excision of hairy nevus can be problematic due to the high esthetic nature of the affected area. Closure of the excisional defect by undermining the surrounding tissue followed by primary closure was questionable. A 20-year-old female patient reported to the Department of Oral and Maxillofacial Surgery at Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur having hairy nevus in the left cheek region undergoing excisional biopsy utilizing contemporary cosmetic surgery approaches was selected. The patient had successful removal of hairy nevus and primary closure was achieved with good cosmetic result. The use of contemporary cosmetic surgical approach for the excisional biopsy of hairy nevus by primary closure as an option for tissue expansion provides adequate surgical access, a cosmetically acceptable result, and is well-tolerated by patients.

**Keywords:** Excision, hairy nevus, primary closer

### Introduction

Hairy nevus is a pigmented patch that resembles a garment or a bathing trunk. Although rare in occurrence these lesions have developed considerable attention due to its cosmetic consideration and relatively high (10–20%) risk of its malignant transformation congenital pigmented nevi have a incidence rate of 2–3% in newborns, a few are larger than 3–4 cm.<sup>[1]</sup> In the review of literature, we found that the nevi were classified depending on its size as small, large, and giant. Pers in 1963 described “giant” as palm size on the face.<sup>[2]</sup> Greeley in 1965 described giant as 144 square inches or more.<sup>[2]</sup> Pilney *et al.* considered a lesion giant when it could not be closed primarily after complete excision.<sup>[3]</sup> It is important to distinguish between congenital as opposed to the ones we develop with age because congenital nevi are thought to have a small chance of becoming malignant. Quaba and Wallace quotes a 8.52% incidence of melanoma developing in nevi larger than 2% of body surface area, the transformation of nevi into malignant melanoma is now an established fact.<sup>[4]</sup> Prophylactic complete excision of nevi is supported by some of the findings from studies conducted by Dellon *et al.* and Rhodes *et al.* on malignant potential of giant pigmented nevus.<sup>[5,6]</sup>

Management of giant hairy nevus of the face can be a challenging task even for an experienced Oral and Maxillofacial Surgeon as it requires a very high standard of skills and also concern for cosmetic results from the patient and parental side. This study gives a broader aspect of treatment modalities which were used to achieve better cosmetic results.

### Case Report

A 20-year-old female patient with hairy nevus in the left cheek region reported to the Department of Oral and Maxillofacial Surgery at Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur. The lesion extended from tragus of the left ear to inferior border of mandible in the left angle region, the lesion measured 5 cm × 3 cm in size [Figure 1]. Skin incision was made after which dissection was performed, care was taken to stay deep to the lesion and dissect out beyond it to improve access. The remainder of subcutaneous flap undermining was completed and tension-free primary closure was achieved. In addition, all the possible efforts were taken to avoid any kind of injury to facial nerve branches, especially when nerve becomes more superficial as one proceeds anterior to the parotid gland [Figure 2].



**Figure 1:** Pre-operative photograph: Large hairy pigmented nevus



**Figure 2:** Post-operative photograph: Primary closure achieved

## Discussion

Approximately 1–6% of the newborns are found to be affected with congenital melanocytic nevi (CMN) which are pigmented cutaneous lesions. Their color is due to the melanin pigment of nevomelanocytes. Melanin pigment of nevomelanocytes gives it a dark brown to black color. Nevomelanocytes are nothing but the derivatives of melanoblasts and they compose the cellular format of the neoplasm.<sup>[7]</sup> About 95% of the CMN have dark, coarse surface hair. Satellite lesions will not be limited to the local site, but it will affect the surrounding periphery as well. As the age advances beyond 10 years, the giant nevus is tend to be more elevated, verrucous and hyperkeratotic associated with thicker surface hair.<sup>[8]</sup> Many times giant hairy nevi are reported in association with several disorders such as neurofibromatosis, epilepsy, or focal neurologic abnormalities and associated vertebral column lesions such as spina bifida or meningomyelocele.

According to Marghoob, the estimated incidence of small cutaneous melanocytic nevi lesions is approximately 1 in 100 infants, whereas 1 in 1000 are born with medium-sized lesions; incidence of large lesions is estimated to be 1 in 20,000 and giant lesions in

approximately 1 in 500,000 infants.<sup>[9]</sup> The prevalence is same for both genders. Autosomal dominant inheritance with incomplete penetrance or multifactorial determination is responsible for the occurrence of small CMN in affected families.<sup>[10]</sup> Primary cause of the giant CMN (GCMN) is thought to be spontaneous mutations or other events during fetal development. Genetic inheritance can also be considered one of the causes due to frequent appearance of these lesions in affected families. The genetic basis of these lesions is still unknown.<sup>[7]</sup> The other differential diagnosis for congenital hairy nevus such as dysplastic nevus, café-au-lait macule, and Becker's nevus. Approximately 30% of patients with large CMN are reported to be associated with behavioral and emotional problems.<sup>[9]</sup> Cosmetic appearance of the CMN, chances of lesion developing into melanoma, the discomfort associated with multiple staged surgical treatments rendered, and the cosmetic appearance of resultant scars may lead to psychological burden on patients and parents.<sup>[9]</sup> In addition, excision scars of some CMN and/or nevi may develop pruritus, tenderness, and fragility of skin which will worsen the patient's discomfort.

Risk of potential development of malignant transformation depends on the size and extension of the nevi.<sup>[10]</sup> According to Watt *et al.*, If the size of nevi involving on face, there is 0.05%–10.7% risk of potential development of malignant transformation.<sup>[11]</sup>

No absolute guidelines can be recommended for the management and treatment of patients with large and GCMN. Therefore, it remains controversial. Various treatment modalities which are full-thickness excisions, partial-thickness excisions, derma abrasions, curettage, laser treatment, and chemical peels can be useful. However, improving the cosmetic appearance remains an important outcome which will be achieved by a combination of different treatment interventions.<sup>[9]</sup> These treatment interventions will help to reduce the overall number of melanocytes which should further lower the risk of melanoma. However, the specified procedures does not completely address the chances of development of melanoma.<sup>[9]</sup> The size and site of the lesion mainly decide the treatment planning for surgical excision of CMN. Extensive lesions of the face do require surgical excision along with tissue expanders, tissue grafts, and tissue flaps to compensate for the large defects. Surgical curettage yields acceptable results in early stages of life.<sup>[7]</sup>

Incision lines which are placed for management of hairy nevus often ends in noticeable scar formation. Elliptical incisions are placed directly over the lesion along relaxed skin tension lines of the face according to conventional methods. Although this system provides good access, the resulting scar will be displeasing to the patient. Different techniques have been described to minimize scarring. One of the foremost widely accepted and practiced technique is of tissue expansion at an early stage of childhood followed by prophylactic excision of the lesion and first closure. In our case, we preferred to travel for primary closure because the lesion was large in size and not giant. The sole drawback that tissue expansion has that it requires an early referral and multiple surgeries. A lesion sufficiently small to be managed by primary closure without tissue expansion should be managed accordingly.

## Conclusion

Different treatment modalities are often employed by the authorities for the management of giant hairy nevi of the face. Many of them can be helpful in achieving good cosmetic results:

- a. Tissue expansion is one of the treatment modality for the management of such cases with minimum donor site<sup>[12]</sup>
- b. Full thickness flaps may also give good color matching for covering the periorbital and nasal area. (local flaps)
- c. Expanded flaps/regional flaps offer excellent cosmetic outcomes while reducing the need of series of surgical procedures and minimizing the donor site morbidity
- d. Treatment can safely begin with the placement of the primary expanders at 3 months of age
- e. As required for the treatment of in-depth lesions, tissue expansion is usually repeated.

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