

Giant Bilateral Becker's Nevus: A Rare Presentation and a Brief Review of Literature

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ABSTRACT

Becker nevus (BN) or Becker melanosis is a cutaneous hamartoma characterized by a large, unilateral, hyperpigmented area with irregular borders and coarse dark terminal hairs. Becker nevus is thought to be an androgen-dependent lesion with increased androgen sensitivity and receptor density within the lesion. Although Becker's nevus is generally unilateral in nature, there are very few reported cases of bilateral symmetrical lesions without other associated anomalies. We herein report a rare case of bilateral, symmetrical, non-syndromic giant Becker's nevus and have also reviewed the probable pathogenesis and emerging treatment modalities.

Keywords: Bilateral, giant Becker's nevus, non-syndromic

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INTRODUCTION

Becker nevus is also known as Becker melanosis or epidermal hairy nevus. It was first described by Becker in 1949 as a "concurrent melanosis and hypertrichosis in the distribution of nevus unius lateris."(1). Becker nevus has been characterized by unilateral, hyperpigmented macules and patches located on the proximal upper extremities, with or without hypertrichosis and comedones (2). There are very few reports in the literature of multiple Becker nevi in the same individual. We present a rare case of bilateral, symmetrical Becker melanosis.

CASE REPORT

A 14 years old boy presented with an asymptomatic bilaterally symmetrical grey –black, irregular flat skin lesion on upper chest, bilateral shoulders extending to both forearms since 2 years. There was no history of trauma, excessive sun exposure or preceding inflammation in this area. On cutaneous examination there was a widespread tan to brown patch of approximate size of 10×12 cm² in a symmetrical distribution on the skin of his anterior chest, upper abdomen, back, and both upper arms, with extension to both forearms with terminal hairs and comedones [Figure 1: Extensive bilateral symmetrical hyperpigmented patches present on anterior chest, back, and both upper arms, with extension to the forearms]. There was conspicuous absence of satellite lesions and rugosity on the surface of lesion as seen in congenital melanocytic nevus (CMN).

On further examination and routine investigations, no associated cutaneous or systemic anomalies were found. Skin biopsy was done with the differential diagnosis of Becker's nevus (BN), CMN and giant café-au-lait spot. On histopathology, hyperkeratosis with slight acanthosis, regular elongation of rete ridges and increased basal and suprabasal

melanophages were seen [Figure 2: Histological examination showing hyperkeratosis with slight acanthosis, regular elongation of rete ridges and increased basal & suprabasal melanophages (Hematoxylin–eosin stain, ×100)]. This confirmed our diagnosis of Becker's nevus and the patient was reassured about its benign nature.

DISCUSSION

Becker's nevus (BN) represents an organoid hamartoma consisting of epidermal and mesodermal derived tissues. In a study of almost 20,000 military recruits aged 17–26 years, becker's nevi were identified in approximately 0.5% and was usually noticed at or after puberty.(3) Lesions often are asymptomatic and are identified after puberty owing to increased pigmentation and hair growth. According to some authors, male preponderance (5:1), onset during adolescence, association with hypertrichosis and comedones may be due to local androgen hypersensitivity as compared to adjacent normal skin (4). Although these lesions can occur on anybody site, they are most commonly observed on a unilateral shoulder, anterior chest and scapular area (5).

Differentials include Congenital Melanocytic Nevus (i.e. congenital in nature, presence of satellite lesions, with time develop rugosity/nodules on the surface and nevus cells seen on histopathology) and giant café-au-lait macule (present since birth with absence of hypertrichosis and comedones). There are a large group of cutaneous and extra-cutaneous conditions associated with BN such as smooth muscle hamartoma, malignant melanoma or acneiform eruptions and others have been only sporadically described, such as connective-tissue nevus, acanthosis nigricans, polithelia, perforating granulomatous folliculitis, granuloma annulare, localized scleroderma, pityriasis versicolor, lichen planus, lymphangioma and basal cell carcinoma.(5) The new term “Becker's nevus syndrome” has

been proposed to describe the simultaneous occurrence of BN with ipsilateral non-cutaneous abnormalities (such as unilateral breast hypoplasia, muscular or skeletal defects).(5)

There are several reports of multiple BN present in the literature. However, till date, there are only three cases of bilateral symmetrical Becker's nevi in the literature so far and none of them are from India. The first case was reported by Ferreira et al. in a 4-year-old Caucasian girl with roughly symmetrical, bilateral, well-defined Becker nevi extending over her scapular regions, shoulders, and arms.(6) The second was a 14-year-old Iranian boy with widespread Becker nevi on the anterior chest, upper abdomen, upper arms, and bilateral scapular region, with roughly symmetrical lesions on the posterior trunk described by Khatami et al.(7) The third case was reported by Grim et al. in 45 years old African-American with non-syndromic BN symmetrical distributed on the chest.(8) Thus, we are reporting the first case of bilateral, symmetrical, non-syndromic Becker's nevi that had developed peri-pubertally from Indian subcontinent.

Reassurance may be all that is needed for a limited lesion on a covered area, whereas lesions on exposed areas may need intervention. BN is considered a benign melanocytic skin condition and malignant transformation is a controversial issue. There are various modalities of treatment. In past the treatment of BN included mechanical abrasion, surgical excision or cryotherapy. However, final cosmetic results were unfavourable and defective scarring or repigmentation was common after treatment (9, 10)

LASERS like Ablative lasers, Pigment-specific Q-switched lasers, Intense Pulse Light (IPL) and Fractional resurfacing lasers are new weapons in the therapeutic armamentarium for Becker's nevus. Initially, non-specific lasers such as Argon and CO₂ laser were used in the treatment of BN. Nevertheless, they were associated with high rate of adverse effects like scarring and pigmentary changes such as post-inflammatory hypo- or hyperpigmentation.(11,12) The development of more pigment-specific laser systems led to BN

treatment with almost no permanent side effects. These pigment-specific lasers include Alexandrite, Nd- YAG and Ruby Laser. However, in some cases, complete re-pigmentation was observed due to persistence of deeper adnexal melanocytes (13). There are also a case report comparing Nd-YAG laser and Erbium: YAG laser. Erbium: YAG was found to be more effective than Nd-YAG but patient experienced a higher incidence of adverse effects such as persistent erythema, scars and pigmentary changes (14). There have also been reports of using a long-pulse ruby laser and long-pulse alexandrite laser with lower recurrence rate (15). More recently, fractional resurfacing has been used, but hypertrichosis is not affected after treatment with this modality (16).

Topical modalities have not been much explored in the treatment of Becker's nevus. In a recent trial done by Taheri et al topical 4% solution of Flutamide has been used locally twice daily for 8 weeks period in a 22-year-old Caucasian woman with 10 years history of BN not responding to Q-switched Laser treatment and topical hydroquinone. Topical Flutamide was found to be effective with significant reduction in hyperpigmentation. But no change was observed in hypertrichosis. According to his observation, topical flutamide was not associated with any cutaneous or systemic adverse effect. The rationale for its use in BN is its anti-androgenic effect (17). However, long term studies on large number of patients are required to support this observation.

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Fig 1: Extensive bilateral symmetrical hyperpigmented patches present on anterior chest, back, and both upper arms, with extension to the forearms

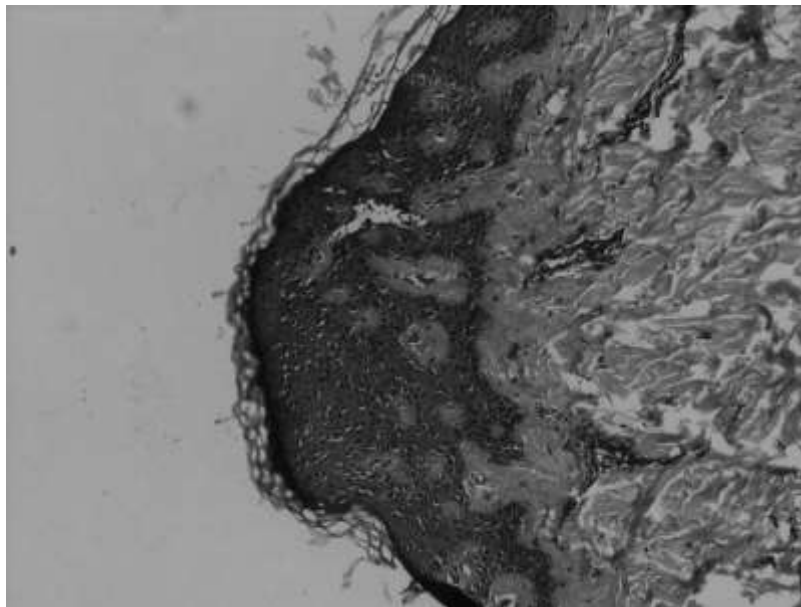


Fig 2: Histological examination showing hyperkeratosis with slight acanthosis, regular elongation of rete ridges and increased basal & suprabasal melanophages (Hematoxylin–eosin stain, $\times 100$)