Journal of Pigmentary Disorders
ISSN: 2376-0427

Bohra and Bhateja, Pigmentary Disorders 2015, 2:8
DOI: 10.4172/2376-0427.1000199

Mini Review Hybrid Open Access

"Nevus of Ota": A Rare Oro-Facial Pigmentation- Short Review

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Abstract

Nevus of Ota is a dermal melanocytic hamartoma of unknown cause and rare in Indian subcontinent, associated with ophthalmic, maxillary and mandibular divisions of trigeminal nerve. Oral involvement of nevus of ota is very rare and found mostly in females. This review highlights this obscure, but important oro-facial pigmentation.

Keywords: Nevus of ota; Oculodermal melanosis; Oro-facial pigmentation

Introduction

Nevus of Ota is a macula-dermal discoloration occurring due to failure of melanocytes migration from the neural crest to derma-epidermal junction. More common in Asian and African population Hulk firstly described this condition as oculodermal melanosis in 1861 [1,2]. The Japanese dermatology professor Masao Ota, described "bluish-grey irregular hyper-pigmentation along the first and second divisions of the trigeminal nerve with frequent mucosal involvement as 'Nevus fusco-caeruleus opthalmomaxillaris and melanosis bulbi' in 1939. In 1956, Fitzpatrick renamed the syndrome to oculodermal melanocytosis. Nevus of Ito, described by Minor Ito in 1954, is a dermal melanocytic condition affecting the shoulder area [3,4]. Worldwide prevalence of nevus of Ota is around 0.10-0.32%. Incidence rate in Asian population is around 0.04%-0.34%. It is more prevalent in female population with male to female ratio is 1.4:8 [5,6].

Characteristics

Ophthalmic, Maxillary and Mandibular divisions of trigeminal Nerve are involved out of which maxillary is most common [7,8]. The color of the skin lesion is brown or blue, the diameter of the area is 1–10 cm or larger. The color or perception of the color of nevus of Ota may fluctuate according to personal and environmental conditions, such as fatigue, menstruation, insomnia, and cloudy, cold, or hot weather conditions [9,10]. The morphological appearance of nevus of Ota is classified as Homogenous (macular with equally distributed pigment density) Speckled (scattered spots of discoloration with similar or various pigment density) Mixed (speckled pattern on a background of homogenous macule) [11].

Patho-physiology is yet to be confirmed even if it has been postulated that Nevus of Ota and other dermal melanocytic disorders such as nevus of lto, blue nevus and mongolion spots may represent melanocytes that have not migrated completely from neural crest to the epidermis during embryonic stage [12]. The two peak ages of onset in early infancy and in early adolescence suggest that hormones are a factor in the development of this condition [13].

Tanino's Classification

It was divided into 4 types on the basis of skin involvement area [14,15] (Figure 1).

Type I - Mild

Type Ia – Eye region type

Type Ib – Zygomatic region type.

Type Ic – Forehead type.

Type Id – Nostril type

Type II - Moderate.

Type III- Severe.

Type IV- Bilateral type.

Based on innervation area of the trigeminal nerve branches as below, named PUMCH classification [15] –

Type I: pigmentation macules involving one branch of the trigeminal nerve.

Type Ia: Ophthalmic nerve.

Type Ib: Maxillary nerve.

Type Ic: Mandibular nerve.

Type II: pigmentation macules involving two branches of the trigeminal nerve.

Type IIa: (ophthalmic and maxillary nerves; V1 + V2) of the trigeminal nerve;

Type IIb: (maxillary nerve and mandibular nerve; V2 + V3) of the second and third branch of trigeminal nerve.

Type III: (ophthalmic, maxillary, and mandibular nerves; V1 + V2 + V3) of the trigeminal nerve.

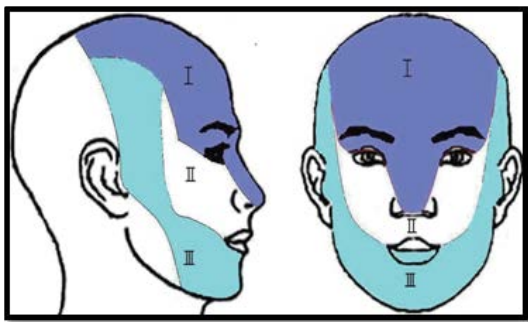

Figure 1: Showing ophthalmic, maxillary, mandibular divisions of trigeminal nerve affected by nevus pigmentation.

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Received April 06, 2015; **Accepted** July 09, 2015; **Published** July 19, 2015

Citation: Bohra A, Bhateja S (2015) "Nevus of Ota": A Rare Oro-Facial Pigmentation- Short Review. Pigmentary Disorders 2: 199. doi:10.4172/2376-0427.1000199

Type IV (bilateral type): bilateral pigmentation macules respectively involve innervation areas of one or more branches of the trigeminal nerve.

Type IVa (symmetric).

Type IVb (asymmetric).

Type V: nevus of Ota with complications, such as Port-Wine Stains (PWS), telangiectasia, vitiligo.

Clinical Features

Mostly asymptomatic, can be associated with melanoma in rare cases (Figures 2 and 3). Ophthalmic division have ocular complications like glaucoma, melanoma associated with cilliary body, iris and optic nerve is also reported [16].

Histopathologic Features

Skin biopsy reveals histopathologic view of dermal melanocytes, bipolar or oval in shape, scattered in the upper and middle portions of the dermis (Figure 4).

Treatment

Topical therapy is of no value in the medical treatment of nevi of Ota. Previous treatment modalities, including cryotherapy, dermabrasion, and microsurgery, can be associated with scarring [17-20]. Development of the Q-Switched Nd: YAG laser (QSYL) and the Q-switched ruby laser (QSRL) has enabled complete, scar less elimination of the pigmentation in patients with nevus of Ota. Without treatment, the skin lesions are permanent.

Figure 2: The pigmentation macules involve tip of nose.

Figure 3: Special manifestations are not in line with Tanino's classification.
3A: Innervation areas of frontal nerve, lacrimal nerve;
3B: Innervation areas of buccal nerve;
3C: Innervation areas of lacrimal nerve, Infraorbital nerve, zygomatic nerve;
3D: Innervation areas of frontal nerve, lacrimal nerve, Infraorbital nerve, zygomatic nerve;
3E: Innervation areas of trigeminal nerve V2 and V3.

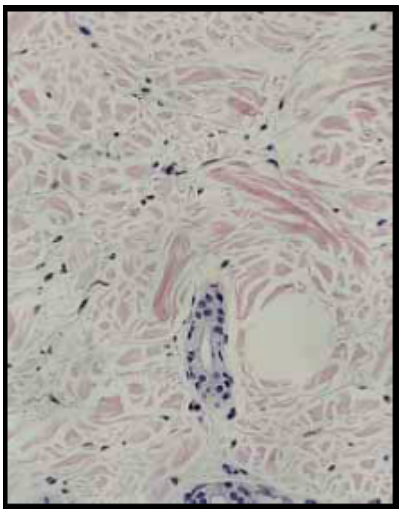

Figure 4: Showing image of Skin biopsy from skin of forehead. Melanocytes scattered in dermis (magnification x400) (Courtesy- Acquired, Bilateral Nevus of Ota-like Macules (ABNOM) Associated with Ota's Nevus: Case Report Korean Medical journal).

References

1. Shanmuga sekar (2008) Nevus of Ota: A case report. Indian Journal of Dermatology,Venereology & Leprology 2: 25-28.
2. Alshami M, Bawazir MA, Atwan AA (2012) Nevus of Ota: morphological patterns and distribution in 47 Yemeni cases. J Eur Acad Dermatol Venereol 26: 1360-1363.
3. Chan HH, Kono T (2003) Nevus of Ota: clinical aspects and management. Skinmed 2: 89-96.
4. Sinha S (2008) Nevus of Ota in Children, Journal of Pediatric Dermatology cutis 82: 25-29.
5. Huang WH, Wang HW, Sun QN, Jin HZ, Liu YH, et al. (2013) A new classification of nevus of Ota. Chin Med J (Engl) 126: 3910-3914.
6. Yutaka Mishima (1961) Nevus of ota & Nevus of ito in American Negroes. The Journal of Investigative Dermatology 3: 19-23.
7. Patzwahl R, Landau K, Kollias SS (2005) Atypical midface tumor complicating nevus of ota. AJNR Am J Neuroradiol 26: 2117-2121.
8. Kannan SK (2003) Oculodermal melanocytosis--Nevus of Ota (with palatal pigmentation). Indian J Dent Res 14: 230-233.
9. Page DG, Svirsky JA, Kaugars GE (1985) Nevus of Ota with associated palatal involvement. Oral Surg Oral Med Oral Pathol 59: 282-284.
10. Rathi SK (2002) Bilateral nevus of ota with oral mucosal involvement. Indian J Dermatol Venereol Leprol 68: 104.
11. Swann PG (2003) The fundus in oculodermal melanocytosis. Is this a new observation? Clin Exp Optom 86: 183-186.
12. Porto JA, Fernandes RC, Lavigne AC (1962) [Nevus of Ota]. Rev Bras Oftalmol 21: 37-43.
13. Gündüz K, Shields JA, Shields CL, Eagle RC Jr (1998) Choroidal melanoma in a 14-year-old patient with ocular melanocytosis. Arch Ophthalmol 116: 1112-1114.
14. Ferreira R, Ferreira LC, Chotgues LF, Kwitko I (1992) Glaucoma secundÃ¡rio a Nevo de Ota: relato de 2 casos e revisÃ¤o de literatura. Rev Bras Oftalmol.51: 353-356.
15. Cowan TH, Balistocky M (1961) The nevus of Ota or oculodermal melanocytosis. The ocular changes. Arch Ophthalmol 65: 483-492.
16. Babic M, Novaes TR, Pinto CRD (2003) Nevo de Ota e glaucoma. Revicience 5: 15-16.

17. Chan HH, Kono T (2003) Nevus of Ota: clinical aspects and management. Skinmed 2: 89-96.

18. Yutaka Mishima (1961) Nevus of ota & Nevus of ito. The Journal of Investigative Dermatology 12: 19-23

19. Huang WH, Wang HW, Sun QN, Jin HZ, Liu YH, et al. (2013) A new classification of nevus of Ota. Chin Med J (Engl) 126: 3910-3914.

20. Park JH, Lee MH (2004) Acquired, bilateral nevus of Ota-like macules (ABNOM) associated with Ota's nevus: case report. J Korean Med Sci 19: 616-618.