

Nevus of Ota on the auricle successfully treated with Q-switched ruby laser

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SUMMARY Nevus of Ota is a dermal melanocytosis that consists of blue-brown spots, patches and plaques along the distribution of the first and second branches of trigeminal nerve. The efficacy of Q-switched ruby laser treatment against nevus of Ota on dark skin has not been described. The present case, a 2-month-old Indonesian girl, showed rare auricular involvement. Because ear has complicated steric structure, whose skin is sensitive and thin, pain and inflammatory reaction are inevitable. We discussed the difficulty of laser treatments on auricular lesions.

Keywords Nevus of Ota, dark skin, ear, Q-switched ruby laser, dermal melanocytosis

Letter to the Editor,

A 2-month-old Indonesian girl visited our hospital for the treatment of her eruption, which was present at birth. The patient had no family history of pigment disorders, and her physical and mental development was normal. On physical examination, a blocky blue plaque with a number of brown spots covered the whole of the left auricle and around the ear (Figures 1a and 1b). There were no other changes in the skin, conjunctiva, or oral mucosa.

A biopsy from the affected skin of postauricular lesion showed the presence of dermal melanocytes in the upper and middle dermis as well as basal pigmentation (Figures 1c, 1d, and 1e). Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Based on above clinical and histopathological findings, we diagnosed this case as having nevus of Ota. Treatment was performed with Q-switched ruby laser at under the topical anesthesia. Because blistering was observed as the adverse effect even with the lowest energy (4 J/cm²), the treatments were performed every 3-4 months, and the postoperative icing and topical corticosteroids were used more frequently. The pigmentation has improved gradually after 4th laser treatments (Figure 1g).

We considered ectopic mongolian spot or blue nevus as the differential diagnoses of the eruptions seen in our patients. Blue nevus was denied by the absence of tumoral proliferation of dermal melanocytes histopathologically. Mongolian spot is different from Nevus of Ota in terms of the absence of color

variation in the lesion clinically and basal pigmentation histopathologically. Furthermore, dermal melanocytes are located in the middle-deep dermis in mongolian spots. Nevus of Ota usually affects the forehead, temples, eyelids, cheeks, and nose, but in this case, they unusually appeared on the auricular, which has been described by a few previous reports (1).

Laser treatment on auricular lesions is sometimes difficult because of the complicated steric structure. Furthermore, because ear skin is sensitive and thin, pain and inflammatory reaction are inevitable. We could not find description about the tips of laser treatments on auricular in textbooks and previous literatures. In our case, treatments were performed carefully to avoid uneven laser irradiation due to the complicated structure. Furthermore, to reduce pain and inflammatory reaction, treatment area in each session was divided into two or three parts, and the postoperative icing and topical corticosteroids were used more frequently for longer duration.

Nevus of Ota typically affects the Asian population (2-4), therefore efficacy has been well established for the laser treatment of Fitzpatrick skin phototype III to IV (5). On the other hand, in individuals with baseline dark skin pigmentation (e.g., Fitzpatrick skin phototype V to VI), clinical data about laser efficacy is still lacking. Postinflammatory hyperpigmentation or hypopigmentation occurs most commonly in individuals with dark skin, because normal distribution of melanin, the target of ruby laser, in the epidermis may be adversely affected. Accumulation of similar cases is necessary to evaluate the efficacy and safety of

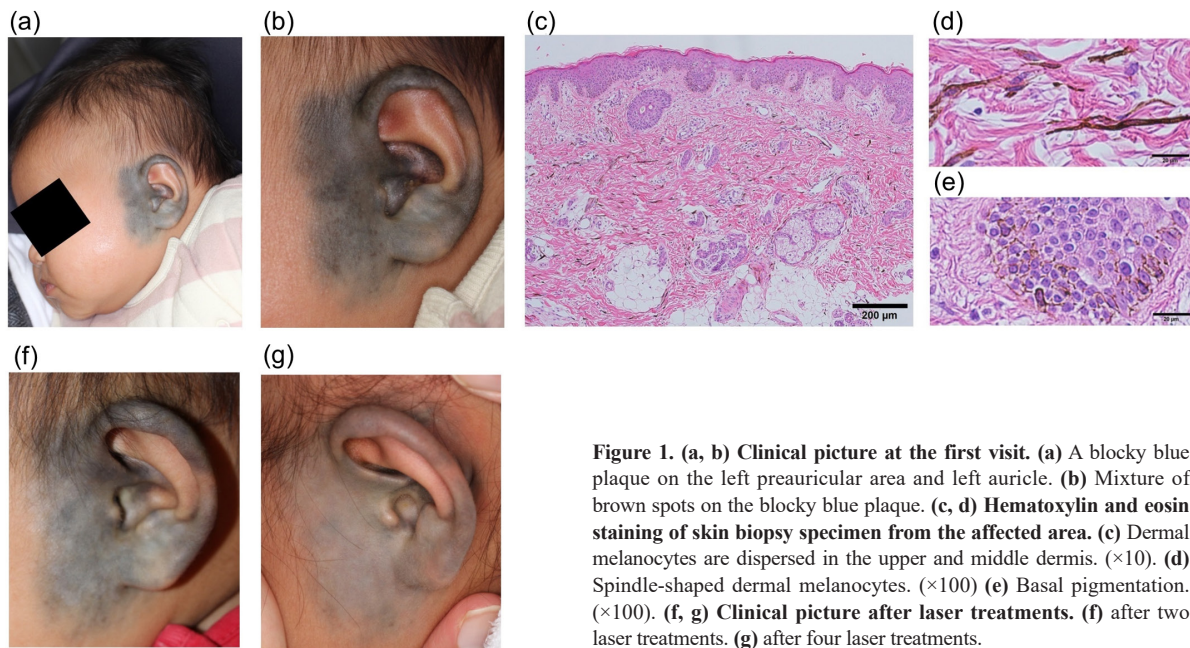


Figure 1. (a, b) Clinical picture at the first visit. (a) A blocky blue plaque on the left preauricular area and left auricle. (b) Mixture of brown spots on the blocky blue plaque. (c, d) Hematoxylin and eosin staining of skin biopsy specimen from the affected area. (c) Dermal melanocytes are dispersed in the upper and middle dermis. ($\times 10$). (d) Spindle-shaped dermal melanocytes. ($\times 100$) (e) Basal pigmentation. ($\times 100$). (f, g) Clinical picture after laser treatments. (f) after two laser treatments. (g) after four laser treatments.

laser therapy for nevus of Ota on dark skin type.

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