

Short Communication

Treatment of Familial Nevus Fusco-caeruleus Zygomaticus with Q-switched Alexandrite Laser

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Keywords

Nevus Fusco-caeruleus zygomaticus; Familial; Q-switched alexandrite laser

Abbreviations

NFZ: Nevus Fusco-caeruleus Zygomaticus; FNFZ: Familial Nevus Fusco-caeruleus Zygomaticus; ABNOM: Acquired Bilateral Nevus of Ota-like Macules; Nd:YAG: Q-switched Neodymium: Yttrium-aluminum-garnet; QSAL: Q-switched Alexandrite Laser; PIH: Post-inflammatory Hyperpigmentation

Nevus Fusco-caeruleus zygomaticus (NFZ) is characterized by the bilateral occurrence of small, circumscribed, speckled, or confluent blue-brown pigmentation on typical locations of malar regions or temples, upper eyelids and root and alae of the nose [1]. It is very common in Asian. NFZ is also termed as nevus of Hori and acquired bilateral nevus of Ota-like macules (ABNOM) [2]. Recently, familial NFZ (FNFZ) was reported in a Chinese family, comprising 7 affected individuals out of 25 family members spread over four generations, in accordance with an autosomal dominant mode of inheritance [2].

The following lasers have been introduced with various clinical outcomes for the treatment of NFZ: the Q-switched neodymium: yttrium-aluminum-garnet (Nd: YAG) laser [3,4], the Q-switched ruby laser [5], and the Q-switched alexandrite laser (QSAL) [6,7]. Our previous study and another report [8,9] showed that QSAL is effective and safe for the treatment of NFZ in Asian people. Here, we report a case of FNFZ with two affected individuals in two generations who were treated successfully with QSAL.

A 22-year-old female presented with small brown speckled spots on the bilateral zygomatic area (Figure 1). The lesions appeared when she was 18 years old, and grew darker with age. Such spots usually become apparent after sun exposure, but they do not usually vary in size. The subject did not take any medicine for a long time and did not receive any previous treatments for the lesions. Her mother, a 54-year-old female, had similar lesions on similar locations and similar ages of onset (Figure 2). The diagnosis of FNFZ was made and the two patients were treated with QSAL with a spot size of 3 mm, pulse duration of 100 ms, and a fluence of 7-8 J/cm². They were advised to

avoid sun exposure and apply sun protection cream after treatment. Both of them were treated for 3 sessions at intervals of 2 or 4 months and achieved a complete clearance without hyperpigmentation and hypo-pigmentation (Figure 3). Two years later, the patient was without relapse.

Clinically, NFZ differs from nevus of Ota in the following aspects:



Figure 1: Small brown speckled spots on the bilateral zygomatic area in a 22-year-old female.



Figure 2: Similar lesions on similar locations a 54-year-old female (the mother in the family).



Figure 3: A complete clearance without hyperpigmentation and hypopigmentation after 3 successive Q-switched alexandrite laser treatments in the younger patient.

NFZ is present in a symmetrical bilateral fashion, has a late onset in adulthood, and lacks mucosa and sclera involvement. In contrast, nevus of Ota is usually unilateral, occurs in the first year of life or during adolescence, and involves the conjunctival, oral, or nasal mucosa, as well as the tympanic membrane [2,3].

Although NFZ has a high incidence in the Chinese population, affecting about 0.8% of the Asian population, with a significant female predominance [1,9], FNFZ is generally rare. In 2012, a case of FNFZ involving sclera was reported in a Chinese family [2]. Our patient showed different type of lesions and did not involve sclera.

QSALs have been used to treat NFZ for a long time, though the clinical response has not been the same. A randomized, double-blinded, split-face, comparative trial, which was performed to evaluate the effect of QSAL treatment for pigmentation in Asians, showed that patients with ABNOM experienced a 35% clearance of their pigmented lesions after a single treatment with a QSAL [6], whereas in the Lam et al. study [8], complete clearance was only seen in 28% of patients after seven treatment sessions. In this report, however, the two patients received complete clearance after three sessions.

Postinflammatory hyperpigmentation (PIH) is common in Asians after QSAL treatment, but the incidence of PIH caused by QSAL was different in different articles. The highest incidence rate of PIH in patients with ABNOM was 75% [6], whereas, in the Lam et al. study [8], PIH was only detected in 12.5% patients [8]. Differences in the complication rate and clinical response may be due to the settings of the laser parameter and treatment intervals [8]. Fortunately, the two patients in our study did not suffer PIH after three treatment sessions.

Limitation

We did not do histopathology for the patients, because they are afraid of scarring caused by biopsy.

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