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FOX-FORDYCE DISEASE ON AXILLA TREATED SUCCESSFULLY WITH 2940-NM ERBIUM LASER

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Abstract:

Fox–Fordyce disease (FFD) is a rare chronic pruritic inflammatory disorder that affect apocrine glands. It affects axillae, anogenital, and periareolar regions in young female.

Treatment of this condition remains difficult and unsatisfactory. In this report, a 27-years-old female present with multiple follicular, skin-colored papules, measuring around 1-2 mm in diameter on both axillae. She was diagnosed with FFD and showed a good response to treatment with multiple sessions of 2940-nm Erbium laser, which to the best of our knowledge had not been described before.

Keywords: *Axilla, Erbium, Fox, Fordyce, Laser.*

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INTRODUCTION:

Fox–Fordyce disease (FFD) known as "apocrine miliaria" is a rare, chronic, itchy and inflammatory disorder that affect apocrine glands (1). The pathogenesis of this disease is not fully understood. Although, hyperkeratosis of upper hair follicles and blockage of apocrine sweat glands could be the underlying pathophysiology. The majority of cases occur in women between the ages of 13 and 35 (2). Treatment of this condition is not widely studied, difficult and unsatisfactory. In this report, we describe a case of Fox–Fordyce disease with a good response to treatment with 2940-nm Erbium laser, which to the best of our knowledge has not been described before.

CASE REPORT:

A 27-year-old Saudi female present to our clinic complaining of multiple itchy dark brown papules over both axillae in the last 4 years. She has no history of any medical illness, drug allergy and denied recently taking any new medications. On examination, there were multiple follicular, dark brown papules, measuring around 1-2 mm in diameter on both axillae. (Figure 1) Based on these findings, the patient was diagnosed as Fox –Fordyce disease.

The initial treatment was 2% salicylic acid mixed with mometasone furoate 0.1% cream for 1 month. After one month, 2940-nm Erbium laser was used to treat small area in the right axilla (SS 1mm, F 50 J/cm, H_2 5). A month later, 2940-nm Erbium laser was done on both axillae (SS 1mm, F 50 J/cm, H_2 5) followed by 2 weeks of mixture of Urea 10% and Lactic acid 5% for 2 weeks. After another month, patient was received another session of Erbium laser with the same parameter used in the first session. In the last visit, patient was seen in the clinic with almost complete clearance of all lesions (Figure 2). In addition, patient reported significant improvement of the associated itching.

DISCUSSION:

FFD is a rare, chronic, itchy, inflammatory disorder that affects apocrine glands. In 1902, George Henry Fox and John Addison Fordyce describe the disease for the first time (1). It is observed primarily in the female during childbearing age and usually improves after menopause. Clinically, it is presented as monomorphic perifollicular, dome-shaped, firm, discrete and skin-colored papules. Most common sites of involvement are areas rich of apocrine sweat glands like axillae, anogenital, and periareolar regions and show a reduction of sweating and hairs. The main complaint usually pruritus and could be aggravated by exercise, heat, and emotional stress (3).

The treatment modalities of FFD is unsatisfactory and difficult. Pharmacological treatments including topical steroids, calcineurin inhibitors, retinoids, clindamycin, oral contraceptives and oral isotretinoin have been reported, but most of these therapeutics provide short term effect (3, 4)

The fractional CO2 laser has been reported with fair and safe outcome with minimal complications (5). *Uzuncakmak* et al reported a case successfully treated with Pulsed dye lasers with mild recurrence after one year of treatment. (6) The use of 1550-nm Erbium laser combined with surgical excision have been reported but hypertrophic scarring and other potential surgical complication is considered a main concern of this modality. (7)

The use of Erbium (2940nm) lasers in the treatment of FFD has not been described before, and to the best of our knowledge, this is the first case report using Erbium laser treatment of this recalcitrant case. We applied two sessions monthly with almost complete clearance.

In conclusion, 2940-nm Erbium laser may offer a good option to treat a patient with FFD, especially for patients that have tried conventional treatments without good response. Further studies are needed to confirm this result.

CONFLICT OF INTEREST:

No potential conflict of interest relevant to this article was reported.

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