EUROPEAN JOURNAL OF INFLAMMATION Vol. 11, no. 1, 245-246 (2013)

LETTER TO THE EDITOR

KYRLE'S DISEASE: TREATMENT WITH MINOCYCLINE AND TOPIC TACALCITOL

S. PERSECHINO, G. CORTESI, C. CAPERCHI, C. ABRUZZESE, A. NARCISI, F. PERSECHINO and A. TAMMARO

NESMOS, U.O.C. Dermatology, Sant'Andrea Hospital of Rome, II Unit University of Rome "Sapienza", Rome, Italy

Received May 7, 2012 – Accepted November 8, 2012

Kyrle's disease is a rare perforative skin dermatosis. It was first described in 1916 by J. Kyrle, under the name of *hyperkeratosis follicularis et parafollicularis in cutem penetrans*. It refers to a disorder of keratinization, which usually appears as scattered or grouped hyperkeratotic papules on the extremities and the trunk characterized by extrusion of keratotic material into an epidermal invagination.

We report the case of a 65-year-old woman who presented with a history of slightly pruritic, keratotic papular lesions of 1 cm diameter with peripheral scaling and central umbilication on her legs (Fig. 1), who had been treated with different topical and systemic regimens, including corticosteroids, antifungal, anti-inflammatory agents, without clinical resolution.

The old lesions did not have signs of inflammation, in contrast the new lesions had clear signs of inflammation with an erythematous ring. The patient had no history of kidney disease, diabetes mellitus or liver disease.

Laboratory investigation revealed a white blood cell count at 9.5 x 10^3/mm^3, haemoglobin at 13.2 g/dl and platelet count 235 x 10^3/mm^3. Erythrocyte sedimentation rate was 48 mm during the first hour. The other laboratory test were normal. Bacterial and fungi culture was negative.

Microscopic examination showed invaginations of the epidermis in several points with inflammatory infiltration, hyperkeratosis of the epidermis, transepidermally keratin elimination and mild perivascular inflammatory infiltration of the dermis. Clinical and histological findings were consistent with Kyrle's disease.

The patient received medical treatment with minocycline 200 mg day *per os* for 1 month, and tacalcitol cream, with great improvement of the clinical situation. At present the patient is still receiving minocycline 100 mg day, and she continues application of the cream.

Kyrle's disease is a form of perforating disorder of the skin with extrusion of keratotic material into an epidermal invagination (1). It appears between 30 and 50 years of age and affects females with a 6:1 ratio compared to males. The disease usually appears as keratotic papules on the trunk and the extremities (2). The differential symptoms are perforating folliculitis, reactive perforating collagenosis, elastosis perforans serpinginosa.

In literature hereditary transmission cases have been described. In our patient no hereditary association was confirmed (3).

The aetiopathogenesis remains unknown. All aetiological hypotheses have been made in relation to diabetes mellitus, liver disease and kidney disease (related microangiopathy, microtrauma due

Key words: Kyrle's disease, keratinization, tacalcitol, minocycline

Mailing address: Giorgia Cortesi, MD
NESMOS, U.O.C. Dermatology,
Sant'Andrea Hospital of Rome,
II Unit University of Rome "Sapienza"
Via di Grottarossa, 1035 00189 Rome, Italy
Tel.: +39 06 33775822 Fax: +39 06 33775378
e-mail: giorgia.cortesi@libero.it

1721-727X (2013)

DISCLOSURE: ALL AUTHORS REPORT NO CONFLICTS OF INTEREST RELEVANT TO THIS ARTICLE.

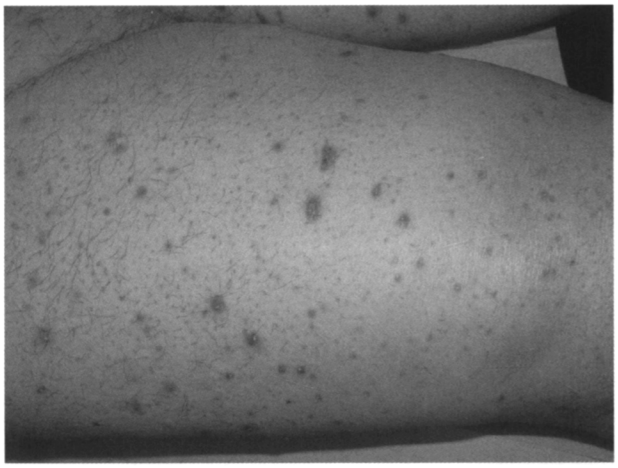

Fig. 1, *Keratotic papular lesions of 1 cm diameter with peripheral scaling and central umbilication on legs.*

to chronic pruritus and abnormalities of collagen, elastin and vitamin A or D metabolis) (1). Recently, the role of extracellular matrix protein, particularly fibronectin and infectious agents has been proposed (2).

The management of patients with Kyrle's disease includes antibiotic therapy, surgical removal of the lesions or destruction of them by cryotherapy, electrotherapy or CO2 laser surgery in addition to local or systemic treatment with vitamin A acid (4).

In our clinical case we decided to use tetracycline especially for its known anti-inflammatory action, in addition to the antibacterial action, and tacalcitol for its action in the regularization of the process of keratinization (5).

The histology and successful antibiotic management supported the hypothesis that infectious agents are the ethiopathogenetic mechanism protagonists, but the negative bacterial and fungi culture, and non-complete remission of the clinical situation confirm the necessity for further study, focusing on a multifactorial aetiopathogenesis.

REFERENCES

1. Kasiakou S, Peppas G, Kapaskelis A, Falagas M. Regression of skin lesions of Kirle's disease with clindamycin: implications for an infectious component in the etiology of the disease. J Infection 2005; 55:139-40.
2. Khalifa M, Slim I, Kaabia N, Bahri F, Trabelsi A, Letaief AO. Regression of skin lesions of Kyrle's disease with metronidazole in a diabetic patient. J Infect 2007; 55(6):e139-40.
3. Viswanathan S, Narurkar SD, Rajpal A, Nagpur NG, Avasare SS. Rare presentation of Kyrle's disease in siblings. Indian J Dermatol 2008; 53(2):85-7.
4. Wolff Schreiner Ech. Kyrle's disease and perforating disorders. 5th ed New York: Mc Graw Hill Book p. 631-6.
5. Mommers JM, ter Meulen AC, van Erp PE, van de Kerkhof PC. Influence of tacalcitol on cell cycle kinetics of human keratinocytes following standardized injury. Skin Pharmacol Appl Skin Physiol 1999; 12(4):174-81.