Parakeratosis pustulosa with Dyskeratotic Cells

O. Avci
A.T. Güneş

Department of Dermatology, Dokuz Eylül University, Faculty of Medicine, Izmir, Turkey

Oktay Avci, MD, Dokuz Eylül University, Faculty of Medicine, 35340 Inciralti, Izmir (Turkey)

General view of the histopathology.

Parakeratosis pustulosa (PP) was first described by Sabouraud [1] under the term of ‘parakératose microbienne du bout des doigts’ in 1931. The disease was mentioned in Lomholt’s Textbook of Dermatology but was almost forgotten until 1967 when the first comprehensive review was made by Hjorth and Thomsen [2]. They obtained detailed data on the clinical features of 91 cases, but they did not investigate the histopathological characteristics of their own 16 cases and finally asserted that PP should be evaluated as a clinical entity [2]. In 1974 Dulanto et al. [3] described the histopathological findings of 1 case. They observed hyperkeratosis with partial parakeratosis, pustules and crusts with degenerated inflammatory and epithelial cells in the horny layer, acanthosis, papillomatosis, cellular infiltrates composed of neutrophils and lymphocytes in the upper dermis and around the vessels [3]. Nevertheless, many authors believe that the disease is a variant of psoriasis [4]. We report 1 case of PP showing dyskeratotic cells.

A 5-year-old white male suffered from erythema and scaling on the tips of the toes and nail changes for 2 years. The parents reported that the lesions had cleared under applications of topical corticosteroids but recurred later.

On examination, the skin adjacent to the free margin of the great toenails was symmetrically covered with fine scales. Also a fissure with bleeding was observed. The great toenails were thickened by a subungual hyperkeratosis and had a koilonychia-like appearance (fig. 1). There were no signs of atopy. Patch tests with the allergens of European standard and mycological examinations were negative.

A skin biopsy specimen was obtained from the tip of the right great toe. Histopathological evaluation revealed hyperkeratosis, an evident granular layer, acanthosis, pustules extending to the parakeratotic layer and dyskeratosis.
Fig. 1. Fine scales, subungual hyperkeratosis and koilonychia-like appearance on the great toes.

Fig. 3. Neutrophil and lymphocyte accumulation in epidermis and dyskeratotic cells (arrow).

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slight papillomatosis (fig. 2). Many dyskeratotic cells in the spinous layer were also observed
(fig. 3). In the upper dermis, cellular infiltrates composed of neutrophils and lymphocytes around
the vessels were found.

The lesions improved after the topical application of corticosteroids. No recurrence was observed
in the follow-up period of 4 months.

To our knowledge the histopathological features of this case are distinct. As far as the clinical
presentation could be compatible with the entity described as PP, the histopathology may serve
as a distinctive criterion to separate it from psoriasis. Although biopsy of the toes is not easy to
perform in children, we are enthusiastic in sharing our observation with others.

References
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Dear Reader:

... como una taza de plata, like a plate of silver, the city’s skyline floats above the horizon before the eyes of approaching travellers. Founded by the Phenicians 1100 BC, well before Rome, it was a city of trade right from the beginnings due to its splendid natural harbor. The identity with biblical Tarshish has remained speculative. Greek Καδής became Roman Gades and citizenship was coveted and ranked second in the Empire, i.e. of Islam followed till reconquista took place in 1262. Cadiz became the most important port of trade with the overseas dominions of Spain and in the mid-1700s it rivalled London in wealth [1,2].

What leads the travelling dermatologist to this baroque town of coastal Spain? Two facts, (i) The Coiegio de cirujanos de la Armada of 1748, a university since 1979. To the author, basically a dermatologist, who resides in a former Surgical Military College (of 1785; today the home of history of medicine in Vienna), the above coiegio is a welcome site for a visit, (ii) Dermatology in Cadiz. It moved from historical to modern premises in 1992, parallel to the move of the two Vienna departments into a modern complex in the same year, pew incomparable con la belleza del hospital de aspecto colonial (classicism in Vienna) [3],

Professor José Cabré (1947-1981) obtained the chair of dermatology in Cadiz in November 1964. A graduate of the University of Barcelona with a doctorate also of the Goethe University in Frankfurt-on-Main, he initiated a period of growth and greatness of the discipline. In 1967 he organized the Reunion Nacional de la Academia Española in this city to serve as its president in 1970. He became dean, continued his career in Barcelona, was elected rector. Eventually, he moved to Madrid but met his untimely death at age 47. In his honor, a memorial lecture was established. In 1990 Danilo Stevanovic, Belgrade; 1991 Juan Ocaña Sierra, Granada; 1992 Jordi Vidal Lliteras, Barcelona; 1993 Jean Thivolet, Lyons; 1994 the writer, were the lecturers, invited by Professor Joaquin Calap Calatayud, chairman of today [3].

Across the bay of Cadiz lies Rota and the American base, 12 miles beyond Sanlúcar de Barrameda where Magellan sailed in 1519 to circumnavigate the globe. Thirty miles south is Cabo Trafalgar where Nelson won and died, 1805. Historical ground indeed.


ó bientôt,
KM., Vienna
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