of an antiparasitic agent, benzyl benzoate (BB) 5% and applied once a day for 30–60 days. One patient had cyclins in addition to BB. No other medicaments were applied. A CLSM examination was performed before treatment (showing at least 10% of hair follicles infested with Demodex in our eight patients) and at the end of treatment. Average time between the two examinations was 54 days [30–63 days]. In three patients (one treated with BB and cyclins and two with BB alone), we observed a complete clinical resolution paralleled by disappearance of Demodex on CLSM (Fig. 2). Partial clinical improvement, defined as more than 50%, was noted by three patients with simultaneous disappearance of Demodex on CLSM. Finally in 2 cases, no clinical or CLSM improvement was observed.

Our study confirms the value of CLSM for detection and quantification of Demodex in patients with papulopustular rosacea. Given the characteristic feature of Demodex in CLSM, it is likely that the negative parasitological examination in other patients reflects a lower threshold of skin scraping that requires extraction of the mites from the follicles compared to the direct visualization allowed by CLSM.

Demodex is present in each human adult skin, its mere detection is of poor significance: only its density has a true significance, being normal ≤ 5D/cm² by standardized skin surface biopsy. Nevertheless, in our study, we used skin scraping to detect the presence of mites because we were more familiar with this sampling method and we have considered that the detection of mites and its prevalence in our groups could reflect its density. It would be interesting to further compare CLSM with standardized skin surface biopsy that seems to be more reliable than skin scraping.

There is presently no consensus upon the optimal treatment of Demodex induced facial dermatoses. Based on a large comparative study showing parasitological efficiency of BB, eight patients were treated and we obtained comparable results. Follow-up was facilitated by CLSM monitoring of Demodex density instead of repetitive skin scrapings, suggesting that CLSM will be useful for the evaluation of future antiparasitic agents.

In conclusion, our study confirms with parasitological examination the observations of Sattler et al. concerning the detection of Demodex by CLSM. BB seems to be an effective eradicating treatment in the context of Demodex related facial dermatoses. Our observation remains to be confirmed by both comparing CLSM to standardized skin surface biopsy and studying on a larger sample.

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Acquired racquet nails: a useful sign of hyperparathyroidism

Editor

Racquet nail is a deformity resulting in a short, broad and flat nail. It usually results from the malformation of the underlying bone and soft tissues of the terminal phalanges. Isolated thumb nail deformity has been observed most commonly.

DuBois was the first to describe this nail deformity. He believed that it was a sign of congenital syphilis. Thereafter, two forms have been described: the genetic and the rare acquired form in association with hyperparathyroidism. The former involves principally the thumb. Thomsen pointed out that in unilateral cases of stub thumb, the gross cartilage plate of the anomalous phalanx is obliterated, while the corresponding one of the unaffected side is still intact.

Burrow related this anomaly to the early closure of the growth cartilaginous line of the terminal phalanx. This genetic disorder occurs mostly as an isolated anomaly and it is transmitted as an autosomal dominant trait. It may also occur in association with many syndromes.

Basset has described three different types of short nails: racquet thumb, racquet fingers and the simple short nails.

Ronchese has observed in his series of 150 patients that all the digits may be affected with the predominance of bilateral involvement.

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The anomaly is a source of embarrassment especially for young women who will place the hand into a fist-position with the affected thumb or thumbs hidden.6

A 20-year-old healthy male presented to our clinic with a 2 year history of asymptomatic changes of the shape of all fingers nails. The patient reported no family history of the same complaint. Physical examination showed widening and shortening of all finger nails bilaterally with the exception of little finger nails (Figs 1,2). Toenails were spared. Plain x-ray of both hands showed low bone density in the proximal phalanges in the 2nd to 5th finger bilaterally. Blood tests showed high parathormone (PTH) (110.3 pg/mL; reference range: 15–85), serum 25-hydroxy-D3 was low (<10.0 nmol/L; reference range ≥75); TSH, T3, T4, calcium, phosphorous and creatinine were within normal limits. The diagnosis of acquired racquet nails (brachyonychia) in association with hyperparathyroidism was established.

There are very few cases of hyperparathyroidism published in the literature.7–9 In our observation, besides the high level of PTH it was easy to rule out psoriatic arthropathy with ultrasonography and X-ray. Absence of nail biting was obvious.

It is customary to distinguish three categories of hyperparathyroidism. In primary type (the most common), there is usually autonomous secretion of PTH by a single parathyroid adenoma (90%), while carcinoma has been reported very rarely (1%). Secondary hyperparathyroidism is present when there is hyperplasia with increased PTH reaction in an attempt to compensate for a prolonged hypocalcemia. Its effect is to restore serum calcium levels. This type is usually due to chronic renal failure, malabsorption osteomalacia and rickets. In a very small proportion of cases of secondary hyperparathyroidism, continuous stimulation of the parathyroid glands may result in adenoma formation and autonomous PTH secretion.10 Definition of tertiary hyperparathyroidism is a primary hyperparathyroidism developed on a hyperparathyroidism that is secondary to a hypocalcemia of a renal insufficiency. From a diagnostic point of view, it is easy to recognize because it is a hyperparathyroidism during a renal insufficiency which is no longer in hyper or normocalcemia but results in a hypercalcemia.10

Radiographically, racquet nails can be associated with some characteristic changes. In early stages, subperiosteal demineralization can be noted in the phalanges. This may be followed by resorption of the terminal phalanges with occasional appearance of acroosteolysis. This is particularly true in ‘brown tumour’ of hyperparathyroidism which can be indistinguishable from giant cell bone tumour and giant cell reparative granuloma of the bone upon pathological analysis.11

Beside the racquet nails, cyanosis of the finger tips as a result of decreased perfusion from vascular calcification may lead to gangrene of the fingers and toes.12 Onycholysis, pachyonychia, Muehrcke’s bands, leuonychia, half-and-half nails and koilonychia may also be associated with nail changes.

In conclusion, we recommend measuring parathormone and serum 25 hydroxy-D3 in every patient with an acquired form of racquet nails.

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Low prevalence of positive skin pathergy testing in Danish patients with Behçet’s disease

Editor

Behçet’s disease (BD) is a rare inflammatory disease of unknown aetiology, characterized by multiorgan involvement and a chronic relapsing course. In the absence of pathognomonic symptoms or definitive laboratory tests, a diagnosis of BD is based on clinical findings and may be supported by a positive skin pathergy test (SPT). With the latest revision of the ‘International criteria for Behçet’s disease’¹, the role of pathergy testing has been reduced, but still of diagnostic significance in endemic BD areas. However, SPT positivity is less frequently seen in non-endemic countries, questioning its diagnostic potential here. Due to the migration of Middle Eastern individuals to Scandinavia, we evaluated the role of SPT in patients with BD in Denmark.

Between June 2010 and September 2011, patients with BD at the Department of Rheumatology, Rigshospitalet, underwent SPT as part of their clinical work-up. Using 21 gauge sterile syringe needles, three skin pricks were placed at three centimetres distance, at an angle of 45°, 3–5 mm intracutaneously on the ventral forearm. One of the skin pricks was accompanied by injection of 0.1 mL isotonic sodium solution, and all procedures were performed without prior disinfection of the skin. Reactions were read after 48 h. A positive SPT was defined as an erythematous papule ≥2 mm or a pustule at the site of the needle prick.

A total of 26 BD patients were enrolled (Table 1). Median age was 41 years (range 24–62), and median disease duration 5 years (range 0–22). All patients had multiple organ affection, oral cavity ulcers being the most frequent symptom (100%). Most patients (65.4%) received systemic anti-inflammatory treatment at the time of examination. Only 2 (7.7%) patients had a positive

| Table 1 Patient characteristics |
|---------------------------------|
| **Total** | **Positive SPT** | **Negative SPT** |
| (n = 26) | (n = 2) | (n = 24) |
| **Demographics** | | | |
| Age, y, median (range) | 41 (24–62) | 44.5 (33–56) | 40.5 (24–62) |
| Gender, n | | | |
| Male | 13 | 1 | 12 |
| Female | 13 | 1 | 12 |
| **Origin, n** | | | |
| Denmark | 9 | 0 | 9 |
| Turkey | 8 | 1 | 7 |
| Morocco | 1 | 0 | 1 |
| Libya | 1 | 0 | 1 |
| Iran | 2 | 1 | 1 |
| Middle East, unspecified | 3 | 0 | 3 |
| Thailand | 1 | 0 | 1 |
| China | 1 | 0 | 1 |
| BD duration, y, median (range) | 5 (0–22) | 11 (1–21) | 5 (0–22) |
| **Manifestations** | | | |
| Current symptoms, n | | | |
| Skin | 5 | 0 | 5 |
| Oral | 9 | 1 | 8 |
| Genital | 4 | 0 | 4 |
| Joint | 5 | 2 | 3 |
| Eye | 6 | 0 | 6 |
| Neurologic/vascular | 8 | 0 | 8 |
| Former symptoms, n | | | |
| Skin | 9 | 1 | 8 |
| Oral | 17 | 1 | 16 |
| Genital | 12 | 1 | 11 |
| Joint | 6 | 0 | 6 |
| Eye | 8 | 0 | 8 |
| Neurologic/vascular | 3 | 0 | 3 |
| Current medications* | | | |
| None, n | 9 | 0 | 9 |
| Prednisolone, n | | | |
| 5 mg/day | 3 | 2 | 1 |
| 7.5 mg/day | 1 | 0 | 1 |
| 10 mg/day | 2 | 0 | 2 |
| 25 mg/day | 1 | 0 | 1 |
| Biologics, n | 3 | 0 | 3 |
| Methotrexate, n | 3 | 0 | 3 |
| Ciclosporine, n | 2 | 1 | 1 |
| Azathioprine, n | 7 | 1 | 6 |
| Colchicine, n | 1 | 0 | 1 |

* n = 5 patients did not receive monotherapy.

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