

# Letters to the Editor

inflammation. Extensive and long-term studies will be required to assess our single observation.

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## Blue coloured skin in psoriatic arthritis

Sirs,

Psoriatic arthritis (PsA) is disease that originates from many reasons (1,2). The appearance of the skin over the joint leads to the diagnosis with great probability. We have confirmed this fact by findings on a large number of patients with PsA.

We examined 650 patients with the diagnosis of PsA and 1,265 patients with rheumatoid arthritis (RA) during the period 1975 to 1998. Besides the clinical examination, we performed laboratory testing, radiographs of involved joints and axial skeleton as well as histocompatibility antigen assays accord-

ing to Terasaki and McClelland (3).

Diagnostic criteria for PsA were existence of arthritis and psoriasis at typical areas (extensor sides of elbows and knees) or at so-called hidden areas (axilla, breast, scalp, umbilicus, nails, intergluteal cleft, obstacle or hurdle) (3-6). All patients with RA fulfilled the Rome criteria and after 1988 the revised ARA criteria (7). In 484 patients with PsA (74.4%) the psoriasis appeared before arthritis; in 150 patients (23.1%) arthritis appeared first; and in 16 patients (2.5%) arthritis and psoriasis appeared simultaneously. Sixty patients (9.2%) had the monoarticular form of arthritis, 320 of them (49.2%) the oligoarticular form and 270 (41.6%) had the polyarticular form of the disease ( $P > 0.05$ ). 120 patients (18.5%) had arthritis of the distal interphalangeal joints, 62 (9.5%) had arthritis mutilans, 12 (1.9%) had symmetrical polyarthritis indistinguishable from rheumatoid arthritis, 328 patients (50.5%) had asymmetrical oligoarthritis, and 128 (19.7%) had spondyloarthritis. Thus, spondyloarthritis developed in 128 patients (19.7%), quite often in the asymmetrical form of PsA.

Blue-colored skin over and around the involved joints was found in 598 patients with PsA (92%) and in 63 patients with RA (5%). The difference was statistically significant ( $P < 0.05$ ). Regardless of psoriatic skin lesions, we observed that the skin over the involved joints in PsA has a unique bluish color of different intensity (Fig. 1), which is different from typical psoriatic skin changes. A blue to violet bluish color of the skin is seen over the inflamed joints and digits in the cases of sausage digits. This color is strongly limited to the joint, spreads over the insertion of the joint capsule and disappears. Skin folds are reduced or disappear depending on the amount of synovial effusion into the joint.

In less involved joints the blue colour develops in over a smaller area, usually on the central dorsal part of the skin over the joint. This colour never develops on the volar, plantar or flexor side of the joints. According to our observations, most patients with PsA have such a change of colour over the involved joints at the onset of the disease and during worsening of the disease. The phenomenon is confined to a period of time. It also rarely occurs with such intensity during hot days, for instance in the summer, or when the hand is immersed in warm water as well as at room temperature and in the inactive phase of the disease.

In psoriasis, the skin is desquamating and erythema appears. If some joint is close to that area, blue coloured skin develops. Therefore, we could find tinged (red-blue coloured) skin in a small region. Otherwise,

the whole skin in psoriasis is rather darker, especially in the regions exposed to the sun (hands, head, face). If psoriasis was present as well, a white blanching ring could be found around the erythema that is developing toward a blue colour (8, 9). However, in Caucasians the colour of the skin on psoriasis is salmon-pink whereas rupoid (Ps rupiosa seu ostracea) are waxy-yellow to orange-brown (10), i.e. quite different from the colour of the skin in PsA.

In conclusion, we may say that we have found a sure sign of PsA - blue coloured skin over the involved joints - that is a condition almost *sine qua non* to reach the diagnosis.

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