Rheumatoid arthritis or psoriatic symmetric polyarthritis? A difficult differential diagnosis

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In many countries, rheumatoid arthritis (RA) and psoriatic arthritis (PsA) are the polyarthritides most frequently diagnosed by rheumatologists. Notwithstanding this, the differential diagnosis between RA and PsA often remains difficult, in part because the classification criteria presently in use are not helpful for this purpose. In effect, the ARA criteria for the classification of RA (1) currently employed in the clinical practice do not require any exclusion criteria. Therefore, it is possible to make a diagnosis of RA in subjects suffering from cutaneous psoriasis. Furthermore, the widely used Moll and Wright criteria for PsA (2) exclude patients with positive rheumatoid factor (RF), whereas the more recent classification criteria for PsA proposed by a French group (3) are less categorical. Finally, the clinical PsA subgroup referred to as symmetric polyarthritis (PsSP) in the Moll and Wright classification can meet the ARA criteria for RA but disagrees with the European criteria for the classification of spondyloarthropathy (4).

Currently, high levels of RF in subjects with symmetric polyarthritis suggest a diagnosis of RA, but RF can occur in many inflammatory rheumatic (such as HCV-related arthritis) (5) and non-rheumatic disorders and in healthy individuals. A non-specific presence of RF was reported in PsA patients (6). A spectrum of autoantibodies other than RF is associated with RA. Antibodies which are directed against citrullinated antigens such as filaggrin, Sa, keratin and cyclic citrullinated peptide (CCP) are considered to be specific for the diagnosis of RA (7). However, in an Italian study antiperinuclear factor directed against pro-filaggrin molecules was present in some PsA patients with symmetric joint involvement (8). A new anti-CCP ELISA test appears to be highly specific for RA and should be evaluated in PsSP (9).

In long-standing polyarthritis, standard radiological examination can show alterations which are typical for RA or PsA, but in early or in effectively treated cases it is frequently impossible to differentiate with certainty PsA from RA when other signs are lacking. Limb edema can occur in both PsA and RA (10,11). Peripheral enthesitis and dactyilitis are signs present in PsA but absent in the RA (12-14).

In view of these problems, the classification criteria of PsA proposed by the French group (3) suggest a combination of clinical, radiological and laboratory data. Interestingly, these include a family history of psoriasis, inflammatory involvement of the spine, chest and heel pain, and diffuse enthesitis. These criteria should be carefully evaluated in the future. Uveitis is another characteristic clinical feature sometimes associated with PsA that can help in the differential diagnosis (15).

Recently, an English group proposed a new classification of inflammatory arthritis on the basis of the presence/absence of enthesitis (16, 17). These authors performed MRI studies on patients with early arthritis and identified two different clinical pictures: a rheumatoid-like one and a spondyloarthropathy-like one. The first is characterized by an inflammation of the synovium, whereas in the second the structures involved at the beginning are the entheses. The real usefulness of this approach in daily practice needs to be confirmed, particularly with regard to its sensitivity and specificity, since in a recent Japanese study MRI enhanced the correct diagnosis of RA but also allowed false-positive results (18). Some limits are its doubtful applicability in long-standing arthritis and the limited availability of MRI in many countries.

Immunohistological analysis of synovial tissue indicates that it is possible to differentiate RA from non-RA patients by the count of CD38+ plasma cells and CD 22+ B cells, which are markedly increased in RA (19). Furthermore, distinct vascular patterns of synovitis were found in PsA and RA by arthroscopy (20). These important analyses are presently little used in daily clinical practice, but their application could be greater in the future, as could the determination of MICA (class I major histocompatibility complex chain-related gene A). In a recent work, MICA-A 9 polymorphism (corresponding to the MICA-002 allele) was sig-
nificantly higher in PsA patients than in either psoriatic or control groups (21). Furthermore, an over-representation of MICA-A 9 was found only in the PsSP subjects (21).

In conclusion, despite the continuing progress made by laboratory and instrumental studies, in some cases it is still difficult to differentiate PsA from RA. In particular, the coexistence of RF and cutaneous psoriasis in patients with symmetric polyarthritis is often a diagnostic challenge, also because we do not know if this association can produce overlapping forms of PsA/RA since specific studies on this topic are not available. A study carried out in 1996 analyzed a large number of patients with RA and non-RA arthritis in the Philadelphia area and compared the ARA classification criteria for RA with the clinical diagnosis made by experienced rheumatologists (22). False positive classifications as RA by the ACR criteria were found in 71% of subjects suffering from PsA. This example shows that these criteria are unreliable in the differential diagnosis between RA and PsA.

The risk of misdiagnoses is increased in those countries with a higher prevalence of PsA cases. In the English literature the prevalence of PsA is indicated as low (23, 24) whereas in the three rheumatology centres making up our Italian study group, PsA cases are more frequent than RA cases (ratio of PsA to Ra approx. 3/1). These data can be explained in part by the high propensity of developing arthritis previously described in the Italian psoriatic population (25).

In our opinion, when the differential diagnosis of PsA or RA is uncertain and, as a consequence, questionable, this doubt can be resolved clinically only by carrying out an adequate follow-up. A positive solution of the problem could be provided in the future by new diagnostic criteria. Recently, an international collaborative group has been constituted to elaborate classification/diagnostic criteria for PsA.

References


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