The Dermatologist's Role in Identifying and Treating Psoriatic Arthritis

Early diagnosis and treatment are essential for reducing the burden of psoriatic arthritis and the likelihood of disability.

Dermatologists are trained to identify, treat, and manage psoriasis, but patients with psoriasis often develop psoriatic arthritis (PsA), as well. Psoriatic arthritis affects 25 percent of the psoriatic population and usually develops between the ages of 30 and 50, an average of 12 years after the onset of psoriasis. Symptoms of psoriatic arthritis include stiffness, pain, swelling, and tenderness of joints and surrounding ligaments and tendons, causing either enthesitis or dactylitis.

Enthesitis occurs when tendons and ligaments or joint capsule fibers insert into bone with common insertion sites being plantar fascia, Achilles' tendons, and ligamentous attachments to the ribs, spine, and pelvis. Dactylitis is a combination of enthesitis of the tendons and ligaments and synovitis involving a whole digit. Although enthesitis and dactylitis are rarely seen in rheumatoid arthritis, they are relatively common in psoriatic arthritis. Radiographic features include joint erosions, joint space narrowing, bony proliferation, and osteolysis (including "pencil in cup" deformity).

Psoriatic arthritis often ranges in severity. It can be very mild or it can result in a severe debilitating erosive arthropathy and a deforming arthritis, as it does in 50 percent of patients. Psoriatic arthritis can also result in axial as well as peripheral disease, causing new bone formation and osteolysis. Severe psoriatic arthritis can result in destructive polyarticular involvement comparable in severity to rheumatoid arthritis. One study of 71 patients suggested that a polyarticular onset—more than five swollen joints—may predict the appearance of erosive and deform ing disease.

In view of the fact that psoriatic arthritis can lead to chronic joint pain, the financial and social implications for the patient are potentially far-reaching. While severity can vary, an important consideration when treating either disease is that the severity of psoriasis does not correlate with the severity of the psoriatic arthritis.

Revealing Results. The new anti-TNF monoclonal antibody golimumab (Centocor) was shown to improve signs and symptoms of psoriatic arthritis, according to results of the GO-REVEAL study presented at the American College of Rheumatology annual meeting. More than half of patients receiving SC injections of golimumab 50mg or 100mg every four weeks experienced improvements in joint and skin symptoms through six months that were sustained through one year. Treated patients experienced improvement in quality of life.

Blue Ray. Intense pulsed light may be more effective for treating photodamage than pulsed dyed lasers, according to recent data presented at the ASDS meeting. In the four-way comparison study, patients were assigned to a single treatment of light activation on the face with one of four light treatments: IPL, IPL plus blue light, PDL, or PDL plus blue light. Blinded physicians graded changes from photos at baseline and at one month after treatment. Results showed that all four combinations provided a significant reduction in AKs. IPL plus blue light had the highest average reduction (84.4 percent), followed by IPL alone (70.8 percent), PDL alone (70.5 percent), and PDL plus blue light (69.3 percent).

Eau Naturalis. A topical ointment may bring relief to patients with plaque psoriasis, according to new data (Arch Dermatol 2008; 144: 1457-1464). Researchers evaluated 42 patients with chronic plaque psoriasis receiving indigo naturalis ointment or vehicle. For 12 weeks, patients applied one of the two ointments to each of two bilaterally symmetrical psoriatic plaques. Indigo naturalis ointment was associated with significant reductions in total scaling, erythema, and induration scores. Clearance or near clearance of the treated lesion occurred in 31 of 42 patients.

Pathogenesis and Diagnosis
Playing an important role in the pathogenesis of psoriatic arthritis are osteoclastic precursor cells, which are increased in blood and the synovial fluid. Elevated TNF levels lead to an increase in osteoclastic precursors, which then migrate to the joint. This results in osteoclastic differentiation and activation resulting in osteolysis.

Diagnosis is based on clinical judgment where specific patterns of joint inflammation, the absence of Rheumatoid Factor (RF), and the
presence of psoriasis may point toward psoriatic arthritis. Two major patterns that occur in the development of psoriatic arthritis are worth noting: peripheral and axial. Psoriatic arthritis patients tend to have an asymmetric oligoarticular, as opposed to the more symmetric polyarticular forms of rheumatoid arthritis. Additionally, about five percent have exclusively axial involvement, whereas 25 percent have involvement of both spine and peripheral joints.

The peripheral polyarticular pattern is similar to rheumatoid arthritis, but it is important to note that psoriatic arthritis is RF negative. Psoriasis and psoriatic onychodystrophy do not occur in rheumatoid arthritis. Additionally, rheumatoid nodules do not appear in psoriasis. Another important distinction is that involved joints in psoriatic arthritis are less symmetric than in rheumatoid arthritis. However, 20 percent of psoriatic arthritis patients have a symmetric polyarticular arthritis resembling rheumatoid arthritis. As noted, dactylitis, enthesitis, and DIP point involvement are common in psoriatic arthritis, but rare in rheumatoid arthritis.

Psoriatic arthritis patients often experience joint stiffness that lasts more than 30 minutes in the morning, as well as swollen digits (dactylitis). When making the diagnosis, evaluating hands and feet is essential. Another indicator of psoriatic arthritis is that 82 percent of patients with PsA have psoriatic onychodystrophy, which is only seen in 40 percent of patients with psoriasis.

The American College of Rheumatology offers a useful set of guidelines for scoring psoriatic arthritis (See Table 1), called the ACR 20, for short. Additionally, The classification criteria for PsA (CASPAR) (See Table 2) consists of established inflammatory arthritis defined by the presence of tender and swollen joints and prolonged morning or immobility induced stiffness with a total of at least three points from the features listed in the table.

Notably, dermatologists and rheumatologists tend to differ when it comes to diagnosis. Lopez et al compared 21 dermatology and 70 rheumatologic practices in Spain. The study included 266 patients, of which dermatologists evaluated 58 and rheumatologists evaluated 208. Fifty percent presented with asymmetric oligoarthritis, and 29 percent with asymmetric polyarthritis. Rheumatologists evaluated erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) and joints more than 80 percent, whereas dermatologists evaluated PASI and BSA 50 percent, joints 45 percent. Eighty-five percent of rheumatologists detected the presence of spondylitis and dactylitis, as compared to 25 percent of dermatologists. Five percent of rheumatologists based their diagnoses on BSA, whereas 50 percent of dermatologists used BSA as a primary diagnosis. For treatment, 72 percent of rheumatologists prescribed disease modifying antirheumatic drugs.

Table 1. Scoring ACR20

The American College of Rheumatology scoring is as follows:
1. > 20 percent reduction in the tender joint count
2. > 20 percent reduction in the swollen joint count
3. > 20 percent reduction in three of five additional measures, including:
   a. patient assessment of pain
   b. patient global assessment of disease activity
   c. physicians global assessment of disease activity
   d. disability index of the Health Assessment Questionnaire
   e. acute phase reactants, i.e. erythrocyte sedimentation rate and C-reactive protein

---Published in Gottlieb et al. J Am Acad Dermatol May 2008

Table 2.

CASPAR Criteria for the diagnosis of psoriatic arthritis consist of established inflammatory articular disease with at least three points from the following features:
A. Current psoriasis (assigned a score of 2; all other features are assigned a score of 1)
B. A personal history of psoriasis (unless current psoriasis is present)
C. A Family history of psoriasis (unless current psoriasis is present or there is a personal history of psoriasis)
D. Current dactylitis or history of dactylitis recorded by a rheumatologist
E. Juxta-articular new bone formation
F. Rheumatoid factor negativity
G. Typical psoriatic nail dystrophy including onycholysis, pitting, and hyperkeratosis

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(DMARD), such as methotrexate and sulfasalazine, as opposed to 50 percent of dermatologists. On the other hand, anti-TNF agents were used by 51 percent of rheumatologists as compared to 60 percent of dermatologists. The study concluded that dermatologists would better serve their patients by more consistently evaluating joints in psoriatic patients.

**Treatment**

Treatment for PsA may vary based on involvement, but there are some points of interest worth noting when prescribing for PsA and/or psoriasis. It’s important to note that patients with moderate to severe psoriatic arthritis require more than NSAIDs or local intra-articular injections of corticosteroids.

TNF inhibitors have been used to treat psoriatic arthritis with varying success. In one study, 57 percent of patients on 40mg adalimumab at week 24 met the ACR 20, as compared to 15 percent of patients on placebo.

Enthesitis and dactylitis improved, but these improvements were not statistically significant. At 48 weeks, 56 percent of patients on adalimumab reached ACR 20, 42 percent met ACR 50, and 30 percent of patients achieved ACR 70. Long-term improvement was maintained without any increase in adverse events.

Another study involving 205 patients on etanercept 25mg sq every two weeks found after 12 weeks, 59 percent of patients achieved ACR 20. At week 48, 63 percent of patients achieved ACR 20, 49 percent achieved ACR 50, and 23 percent made ACR 70. Additionally, radiographic disease progression was inhibited at 12 months.

Finally, 200 patients were treated with infliximab 5mg/kg at zero weeks, two weeks, six weeks and eight weeks. At week 14, fifty-eight percent of patients achieved ACR 20, and at six months, 54 percent maintained ACR 20, while 31 percent achieved ACR 50, and 27 percent patients achieved ACR 70.

**Constant Vigilance**

Because psoriatic arthritis can be disabling, it’s important to make early diagnosis. From a diagnosis standpoint, look for all the warning signs and arthritic symptoms in all psoriasis patients, because psoriasis most often occurs before psoriatic arthritis. I also recommend asking patients about stiffness in fingers and toes, looking for swollen digits, and examining joints to see if they are tender. When treating psoriatic arthritis, it’s essential to note that DMARDs do not prevent the progression of joint destruction, whereas TNF inhibitors do. If we are vigilant in our diagnoses and aggressive with our treatment plans, we are more likely to prevent the disabilities that occur with joint destruction.

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**Table 3. Symptoms of PsA**

<table>
<thead>
<tr>
<th>PsA</th>
<th>RA</th>
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<tbody>
<tr>
<td>Enthesitis, dactylitis, DIP point involvement common</td>
<td>Enthesitis, dactylitis, DIP point rare</td>
</tr>
<tr>
<td>Psoriasis present, usually appears first</td>
<td>Psoriasis not associated</td>
</tr>
<tr>
<td>Peripheral involvement of the polyarticular form in 95 percent of patients</td>
<td>Similar peripheral polyarticular pattern</td>
</tr>
<tr>
<td>Psoriatic onychodystrophy present</td>
<td>Psoriatic onychodystrophy not common</td>
</tr>
<tr>
<td>No rheumatoid nodules</td>
<td>Rheumatoid nodules present</td>
</tr>
<tr>
<td>Little symmetry of involved joints</td>
<td>Involved joints tend to be symmetrical</td>
</tr>
<tr>
<td>Joint stiffness lasts 30 minutes+ in the morning</td>
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</table>

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**Dr. Bagel is on the speakers bureau for Abbott Labs, Genentech, Astellas, Amgen, Stiefel, and Warner-Chilcott.**

2. Poster EADV Paris 2008