



Arthritis & Rheumatology Clinics of Kansas PATIENT EDUCATION

PSORIATIC ARTHRITIS

Introduction: PsA is an illness with many faces. It occurs in about 15% of patients with psoriasis, a chronic inflammatory skin disease affecting 2% of the United States population. Like the skin disease, the joint disease can take on many forms and different degrees of severity.

PsA (pronounced “sor-ee-á-tick” arthritis) is generally classified as a *spondyloarthropathy*, along with ankylosing spondylitis (AS) and reactive arthritis (see related sections). These forms of arthritis tend to involve the spine, particularly the sacroiliac region, and soft tissue structures such as ligaments, and bursa.

While it is not known why some individuals with psoriasis develop arthritis, some experts believe that bacteria living on the skin trigger the joint inflammation. Even so, the severity and disease activity of psoriasis and the severity of arthritis in a given patient do *not* tend to go hand in hand. It is not uncommon, for example, to see severe, debilitating arthritis in someone with minor psoriasis or vice versa. Moreover, some individuals (about 15% of all patients) develop arthritis *before* the onset of noticeable psoriasis.

Features of PsA: Five subsets of patients with PsA have been described: few joints involved (*oligoarthritis*), many joints involved (*polyarthritis*), joint involvement limited to the fingertips, predominantly spinal involvement, and a destructive process known as *arthritis mutilans*.

Oligoarthritis is the most common pattern seen in PsA. Knees, ankles, fingers, and toes are commonly affected joints in these patients. When arthritis occurs in finger or toe joints, swelling of the entire digit is common, resulting in a “sausage” appearance. As opposed to rheumatoid arthritis (RA), joint involvement in PsA patients tends to be *asymmetric*, involving different joints on each side of the body.

Patients with polyarthritis are often difficult to distinguish from RA, and those with mostly spinal involvement resemble AS other than the fact that usually only one sacroiliac joint is inflamed rather than both joints in typical AS patients. Some patients have swelling isolated to the knuckles at the end of the fingers. These individuals also have a high prevalence of fingernail or toenail involvement from psoriasis. Finally,

arthritis mutilans has the potential to rapidly produce joint destruction and deformity. Thankfully, this is the least common variety of PsA.

While the joint disease is the focus of the rheumatologist, in many patients the psoriatic skin disease is severe enough to overshadow the arthritis. Psoriasis, just like the associated arthritis, may occur in several different forms. Most commonly, psoriasis will appear as scaly or silvery plaques that are red at the base and are seen most commonly over the knees, elbows, and scalp. “Guttate psoriasis” is another variation that demonstrates the same scaly appearance but with smaller plaques in a “teardrop” shape.

Some patients have mostly disease involving the nails, which may demonstrate a “pitted” appearance or destruction at the base of the nails. The most severe form of psoriasis is termed “erythroderma,” in which the skin becomes red and inflamed all over the body. This form of psoriasis may result in infections due to skin bacteria invading the bloodstream.

Diagnosis: PsA is diagnosed mostly from a history of the symptoms and examination of the joints and skin. There are no reliable laboratory tests that are specific for this form of arthritis. Moreover, many of the markers of inflammation that are usually seen in RA and other forms of arthritis may be entirely normal in a patient with active PsA. Findings such as joint swelling or evidence of spinal inflammation that fit into any of the above subsets of PsA, along with typical features of psoriasis, are the most important pieces of information that lead to a correct diagnosis.

X-rays may offer further evidence for PsA as well as demonstrating the severity of joint damage. While many may have normal x-rays early in the course of their disease, in certain patients the destruction of joints may be quite severe. The combination of erosions around joints and bony enlargement around these erosions is fairly unique to PsA. Near sites of inflammation, there also may be a “shaggy” appearance to the surface of the bone that also suggests PsA. In patients with spinal symptoms, *sacroiliac* joints, found near the junction of the pelvis and sacrum in the lower back, may appear inflamed or damaged on x-ray. As opposed to AS, however, PsA tends to involve only one, not both, sacroiliac joints.

As in AS or RA, other imaging methods can be useful to document inflammation and/or damage in certain patients when the diagnosis is in question. Magnetic resonance imaging (MRI) can show sacroiliac inflammation as well as joint and tendon inflammation or early erosions that may be difficult to detect on physical examination or conventional x-rays. Ultrasound is also quite useful to document joint and tendon inflammation and can be performed more quickly and less expensively than MRI.

Therapy: Many different treatment options are available for patients with PsA, depending upon the aggressiveness of the arthritis. In individuals with milder disease, reducing symptoms may be adequate, but in those with more widespread involvement

who are at risk for joint damage there are medications available that can prevent the disease from progressing. Many of these therapies also treat the underlying psoriasis, but we will focus this discussion on therapies for PsA and not the skin disease itself.

Non-steroidal anti-inflammatory drugs (NSAIDs) are effective in reducing joint pain and stiffness and may be adequate therapy in patients with milder PsA. Medications in this class include ibuprofen and naproxen, but some affected with PsA may demonstrate a greater response to indomethacin, even though stomach related side effects may limit who is able to take this drug. All traditional NSAIDs have stomach irritation or less commonly damage to the lining of the stomach and bleeding as possible complications. These side effects are significantly reduced when newer NSAIDs such as celecoxib (Celebrex) or valdecoxib (Bextra) are used. Those with kidney disease may not be good candidates for taking NSAIDs, all of which may reduce the kidney's ability to function.

Corticosteroids such as prednisone may be effective in reducing short-term arthritis symptoms, but long-term use may result in unpleasant side effects (see *Medications* section). Moreover, withdrawing steroid therapy often results in a flare of psoriasis. For the most part, corticosteroids are best used for injections of acutely inflamed joints or soft tissues for temporary relief of symptoms.

Sulfasalazine (SSZ) is a slower acting medication also used in the treatment of RA that can further reduce inflammation in PsA and is typically used in combination with NSAIDs. This medication has no effect on the underlying skin involvement. SSZ takes effect in about 2-3 months, and common side effects can include nausea, stomach discomfort, and allergic reactions. More serious side effects are uncommon and can be monitored with blood tests.

Methotrexate (MTX), given in once weekly doses of 7.5 to 20 mg (or higher), is often effective in treating both the skin and joint disease of PsA. Used in treating RA patients as well, MTX suppresses the immune system and in this way reduces the inflammation, thus possibly limiting the joint damage. Liver damage, reduction in blood cell counts, and infection are the major complications that can occur with MTX and must be monitored with blood tests regularly. In patients with severe skin and/or joint disease, these risks are often worth the benefit achieved.

Other “disease-modifying” drugs used in RA and/or lupus that have been applied to PsA include *azathioprine* (Imuran), *cyclosporine* (Neoral), *leflunomide* (Arava), *mycophenolate mofetil* (Cellcept), and the anti-malarial drug *hydroxychloroquine* (Plaquenil). The studies supporting use of these medications for treating PsA are smaller and fewer in number than those supporting the use of SSZ or MTX. Nonetheless, these agents are reasonable options for treating PsA who have failed to respond or have demonstrated side effects from other therapies.

Tumor necrosis factor (TNF) antagonists represent the most exciting and effective agents for treating aggressive PsA resistant to other therapies. These medications block the action of a protein known as TNF, which is responsible for much of the inflammation seen in PsA and other forms of arthritis. Currently, *etanercept (Enbrel)*, *infliximab (Remicade)*, and *adalimumab (Humira)* are the TNF antagonists that have been approved by the FDA for both the treatment of PsA and psoriasis, while the newly approved *golimumab (Simponi)* has been approved for treatment of PsA only. Enbrel, Humira, and Simponi are all given by injection, while Remicade is administered by IV infusion, generally every 8 weeks. As with RA, all of these medications have the ability to limit or actually prevent joint damage.

Side effects of TNF antagonists include infections and injection site or infusion reactions. Patients with multiple sclerosis or severe heart failure should not take these medications, as they may make these conditions worse. Screening with a TB skin test is necessary prior to starting these drugs due to the fact that those with a prior history of tuberculosis may experience a recurrence of their infection.

Recently, *ustekinumab (Stelara)*, another biologic drug that blocks the action of interleukin 12 and 23, other chemicals involved in inflammation, has been approved for the treatment of psoriasis, and limited trials have suggested some efficacy when used for the treatment of PsA. This drug is given by injection every 3 months. As with the TNF antagonists, infectious complications are a concern, but these side effects were only marginally above placebo drugs in recent studies.

Abatacept (Orencia), a biologic drug that blocks the action of T-lymphocytes, a certain type of white blood cell, has undergone preliminary studies for the treatment of PsA. While approved for use in RA, this drug does not yet have approval for treatment of PsA arthritis, despite some promising initial data.

The major strategy in treating PsA is to determine the severity of the arthritis and the skin disease and use the medication(s) that will best treat all of the patient's problems with a reasonable level of side effects and cost. Because of the recent advances in therapy, we now have more weapons to treat all varieties of PsA than ever before.