



INSIGHTS into RHEUMATOID ARTHRITIS

What a diagnosis really means and how advances in treatment, research, and support are changing the outlook for RA for the better

BY MIA JAMES



According to Kelly Young, rheumatoid arthritis (RA) advocate and founder of the website and the blog *rawarrior.com*, one of the biggest challenges for individuals diagnosed with the disease has been inadequate access to accurate, consistent information. In her experience, Kelly says, the dearth of information was most evident when she first tried to learn about RA following her own diagnosis; it is also apparent in the lack of awareness she has encountered in the general public. Thankfully, with efforts such as Kelly's to advocate for awareness and research and a dedicated research community committed to improving treatment for people with RA, the outlook for battling this disease is changing for the better.

AN OVERVIEW OF RHEUMATOID ARTHRITIS

To begin to understand RA, it's important to see beyond the name *arthritis*. Rheumatoid arthritis is a different disease from the osteoarthritis that people are likely to think of, a disorder marked by wear and tear on the joints. Although RA also affects the joints, causing inflammation, Kelly stresses that it's much more than a joint disorder. RA is in fact an autoimmune disease that causes several types of health issues in addition to joint complications.

"I think the biggest misconception is that it's not a disease. I think that many people tend to think that RA is arthritis," Kelly says, explaining that *arthritis* is misleading because RA is not limited to joint symptoms. "Arthritis," she says, "is only a symptom of the disease," and other organs—including the eyes, heart, skin, and lungs—are also affected by RA.

Eric Matteson, MD, chair of the Rheumatology Department at the Mayo Clinic in Rochester, Minnesota, further explains that RA is a "systemic autoimmune disease": *systemic* meaning that it affects a number of organs, and *autoimmune* meaning that the immune system mistakenly attacks and destroys healthy body tissue. In the case of RA, the joints are just one type of tissue that the immune system attacks; and RA is a chronic disease, which means that it persists for a long time. The disease can result in disability, compromised quality of life, and even early death.

RISK FACTORS

According to Dr. Matteson, one known risk factor for RA is smoking. In addition, he says, "There is a genetic component," meaning that an individual with a family history of the disease may be at greater risk. And though RA affects women and men, it's more common in women.

Despite what's known about risk factors for RA, there is still no reliable way to predict onset of the disease. "It's very complicated," Dr. Matteson explains. "There are intrinsic (or genetic) components as well as environmental risk factors." He likens the combination of genetic and environmental risk to a forest's susceptibility to fire. "A dry forest is more susceptible to catching fire," he says, whereas a damp forest is less likely to burn. With RA an environmental risk factor, namely smoking, will more likely trigger the disease in an individual who has a genetic risk than in someone who does not.

SIGNS AND SYMPTOMS

Rheumatoid arthritis causes symptoms that include tender, warm, and swollen joints; morning stiffness that may last for hours; firm bumps of tissue under the skin on the arms; as well as fatigue, fever, and weight loss. The disease often first affects smaller joints (such as in the

BETTER UNDERSTANDING, BETTER TREATMENT

*An innovation in testing paves the way
for more-individualized care.*

Physicians have recently been able to add a powerful weapon to their diagnostic arsenal, thanks to the introduction of the Vectra DA test, a blood test made available in 2010 that can tell physicians more about the disease than was previously possible. For patients this means that doctors will be better able to understand individual disease and select appropriate treatment.

According to John A. Goldman, MD, MACR, FACP, CCD, chief of rheumatology at Saint Joseph Hospital in Atlanta, Georgia, and rheumatology medical director at the Atlanta Center for Clinical Research, Vectra DA measures certain biomarkers in the blood (12 in all), which reflect the activity of RA—how much damage the disease is or isn't causing. The test is added to a larger process of assessing RA. "We examine the patient; we look at their joints; we might do X-rays; we do blood tests; we might remove some of the joint fluid," he says of the various tools he and his colleagues use to determine the extent to which RA is causing inflammation and complications in each patient.

Though blood testing for RA isn't new—previously, doctors have measured C-reactive protein and erythrocyte sedimentation rate—Vectra DA measures blood substances not previously evaluated. These include adhesion molecules, growth proteins, and other proteins, or, as Dr. Goldman explains, "substances that can damage the cartilage." The results, he says, give physicians another way to understand the inflammation associated with RA and another guide in making treatment decisions.

Furthermore, the biomarkers measured by Vectra DA can indicate subtle joint damage that can't otherwise be identified, alerting doctors to the concern that a patient might not be doing as well as it appears and may benefit from a change in therapy. Conversely, Dr. Goldman says, the biomarkers may also confirm that a patient is in good condition and that current treatment is effective. In other words, with the addition of Vectra DA to the RA evaluation tool kit, physicians are increasingly able to choose effective treatment for each patient.

fingers and the toes) and then spreads to larger joints (such as the knees, ankles, elbows, hips, and shoulders). It's common for symptoms to occur in the same joints on both sides of the body. Symptoms may also vary in severity and consistency—meaning that they may come and go.¹

And, as explained previously, the effects of RA are not limited to the joints. The disease can cause complications in organs such as the eyes, heart, and lungs.

EARLY DETECTION

As is often the case with chronic diseases, early detection is the first step in effective treatment of RA because it allows for early treatment, before the disease has progressed significantly. And, Dr. Matteson explains, early detection is one area of progress in the management of RA.

Because the previous standard for RA diagnosis often led to a late diagnosis—after the disease had progressed considerably—Dr. Matteson says that experts within the RA community have looked for ways to detect the disease in earlier stages. As part of this effort, they have been looking for diagnostic criteria beyond the standard blood test, as not all patients who are eventually diagnosed with RA have a positive blood test (which is marked by an elevated erythrocyte sedimentation rate [ESR, or sed rate] as well as rheumatoid factor and anti-cyclic citrullinated peptide [anti-CCP] antibodies for the disease).

To that end they've taken the former standard for diagnosis, which combined blood tests with the number of joints affected, and have lowered the number of involved joints required to make a diagnosis. Now, says Dr. Matteson, a diagnosis of RA is considered when there is "one or more swollen joints, especially if swollen for more than six months and there was no antecedent infection."

The importance of early detection of RA can't be overemphasized, as there is currently no method for preventing the disease. "There is no prevention that we know of because we can't yet predict who will get RA," Dr. Matteson says, underscoring the need for research into ways to identify individuals likely to get RA—a necessary step for preventive measures to be established.

TODAY'S RESEARCH

According to Dr. Matteson, the current outlook for RA research is overwhelmingly positive. "We're making huge progress," he says. "There have been important advances in the past 15 years."

These advances include more-aggressive treatment with drugs such as Rheumatrex® (methotrexate), first developed to treat certain types of cancer and now used at much lower doses to treat RA, as well as drugs known as biologics. Biologics are agents designed to inhibit components of the immune system that play a role in the inflammation associated with RA; Remicade® (infliximab) and Rituxan® (rituximab) are two examples. Also on the research agenda, according to Dr. Matteson, is the search for more-effective therapies for RA, or, as he says, “drugs that really turn off disease.”

Investigation into ways to predict who’s likely to develop RA is also a priority, as this is the first step toward prevention. More understanding of the genetics and the biomarkers associated with the disease will likely hold the key to accurate prediction. Researchers are also looking into ways to determine disease prognosis so that therapy may be appropriately tailored for each patient according to the predicted severity of the disease. This, Dr. Matteson explains, will help doctors avoid prescribing overly aggressive treatment for less severe disease. Along the same lines, he says, is research to further individualize therapy by determining which drugs are likely to work best for which patients.

The most positive news Dr. Matteson cites from the RA research community is that experts are starting to see the possibility of a cure. “We are working toward discovering a cure,” he says, noting the significance of acknowledging this goal when, until recently, a cure was not even considered possible.

LIVING WITH RA NOW

Though it’s exciting to think about research advances on the horizon, the needs of individuals currently living with RA remain a primary concern within this community. Advocate Kelly Young has found that living with RA comes with challenges beyond the pain, complications, and disability that the disease can cause.

One of the noteworthy hurdles Kelly has encountered is the widespread misunderstanding about RA among the general public. She says that because the symptoms aren’t always visible, it can be difficult for others to comprehend the severity of the disease. “You have all these symptoms and pain and disability that are mostly invisible,” she says, which can make living with RA appear less complicated and painful than it actually is. “It causes a lot of psychosocial issues when you have something that’s so debilitating



that it’s taking away your ability to do the things you need to do, and everyone’s looking at you like there’s nothing wrong with you.”

Kelly describes a diagnosis of RA as “a huge new life that’s very unwelcome.” The combination of medications and symptom and side-effect management can be so demanding that she likens it to “an additional part-time job,” which she says can consume an overwhelmingly large part of a patient’s life.

While experiencing firsthand the challenges associated with an RA diagnosis, Kelly has also taken action to address the difficulty of living with the disease. Through her website, *rawarrior.com*, she has sought to raise awareness of RA, provide accurate and consistent information, and create a community for those affected by the disease. And while Kelly has developed an invaluable information resource, the online community she’s created is just as important, especially for a disease that’s so often misunderstood. “I think that that connection, that community—knowing that we’re not alone—has really helped,” Kelly says.

RA OUTLOOK IS IMPROVING

If there’s one message coming from the RA community, from both research and advocacy, it’s that the outlook is ever improving. With the combination of advances in treatment and understanding of RA and improved access to information and support networks, it appears that those affected by the disease have cause to be optimistic. 🌸

REFERENCE

1. Rheumatoid Arthritis. Mayo Clinic website. Available at: <http://www.mayoclinic.com/health/rheumatoid-arthritis/DS00020/DSECTION=symptoms>. Accessed April 9, 2012.