The Role of Ultrasound in Rheumatoid Arthritis: Practical Applications and Limitations

By Percy Balderia, MD

In the majority of patients, diagnosing rheumatoid arthritis is fairly straightforward. There are times, however, when a patient comes in with what sounds like inflammatory arthritis—morning stiffness for longer than one hour, history of swelling, response to NSAIDs—and yet I do not feel any synovitis. While I could do a therapeutic trial, I would think twice before committing someone to prolonged immunosuppression in the absence of any objective evidence of synovitis. In a case like this, I would do an ultrasound of the involved joints.

Earlier Detection with Ultrasound

Ultrasonography enables the detection of joint effusion, synovitis, pannus formation, and joint damage that are not otherwise detected by physical examination and X-rays. Both the American College of Rheumatology and the European League Against Rheumatism recognize the role of ultrasound in diagnosing rheumatoid arthritis earlier, which can lead to earlier treatment.

Limitations of Ultrasound

While ultrasound is helpful when physical examination is equivocal, it has its limitations. It is difficult to look for synovitis in deep joints like the shoulder and hip. Findings of synovitis are not specific to rheumatoid arthritis, so clinical judgement is still necessary. While the presence of Power Doppler signal in synovium has been shown in a few studies to predict flares of rheumatoid arthritis, use of this finding alone to guide treatment has not been shown to be beneficial.
Ultrasound aids in the following:

- Differentiating inflammatory arthritis vs non-inflammatory conditions
- Early diagnosis of rheumatoid arthritis
- Predicting flares of rheumatoid arthritis

Finally, image quality is highly machine- and operator-dependent. Fortunately, The Polyclinic Rheumatology has the latest ultrasound equipment and skilled rheumatologists who perform musculoskeletal ultrasound routinely.

References

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Expanded Services, Hours at Polyclinic Now

Urgent Care is now available at The Polyclinic Northgate Plaza. Polyclinic Now Urgent Care is located on the 2nd floor at Northgate location and offers convenient early morning hours during the week (7 am to 7 pm), and is open on the weekends from 9 am to 5 pm.

Polyclinic Now offers walk-in care for non-life threatening injuries and ailments, including upper respiratory infections, asthma exacerbations, and basic wound care. With onsite X-ray and laboratory services, Polyclinic Now is a fully staffed urgent care center, able to diagnose and treat minor fractures, urinary complaints, as well as an array of other conditions.

Polyclinic Now is led by a physician medical director, Michelle Jacobs, DO, MPH who oversees the daily operations of the clinic, and works alongside experienced ARNPs and PAs, all of whom are dedicated to providing evidence-based and efficient urgent care to patients.

“Our urgent care center at The Polyclinic offers a holistic approach to healing that takes the whole person into account (body, mind, spirit) in every health care interaction. I believe that even in the urgent care setting—which can often be the first or primary source of health care for our patients—we can provide an integrative approach to meet our patient’s needs,” shared Dr. Jacobs.

For more information visit polyclinic.com/now.

The Polyclinic Optometry and Ophthalmology Offer Digital Retinal Scanning

The Polyclinic Optometry and Ophthalmology departments now offer high-resolution, retinal scanning to help detect early signs of eye disease and help manage patients already diagnosed with eye problems.

The Optos retinal scanner creates digital images of the eye called Optomaps. The Optomap digital images offer a more complete and detailed view of the retina than traditional retina exams do, allowing providers to see the entire retina at once. Providers can see changes in blood flow, tumors, or indications of macular degeneration, glaucoma, retinal tears, or detachments. Evaluating the blood vessels in the retina using this detailed image can also reveal early signs of other diseases including heart disease, hypertension, and diabetes.

I have found that using Optos imaging has helped me discover retinal tears more quickly in patients that are at risk for retinal detachment and is essential in recording the size and shape of retinal lesions and benign tumors,” shared Polyclinic ophthalmologist Dr. Todd Johnston. “It has helped immensely in ruling out more serious retinal diseases such as retinal tumors, retinal detachments, and diabetic eye disease. In my practice, it often does not eliminate the need for dilation, but has been extremely helpful in the diagnosis of retinal problems and disease.”

For more information, contact our Optometry/Ophthalmology departments at 206.860.4550.