

**LESLIE
COOPER:**

I'm Leslie Cooper, and I am the Chair of Cardiology at the Mayo Clinic in Florida. In the past two decades at the Mayo Clinic, we've had a focus on inflammatory heart disease, both on a clinical basis and in research. Cardiac sarcoidosis is one of the uncommon diseases that we have focused on and have built international and multi-center registries to help understand the natural history of sarcoidosis, the best management strategies, and, ultimately, the way we can help our patients understand and cope with the disease better.

Sarcoidosis as a whole is not that uncommon, affecting perhaps 50 per 100,000 people. But cardiac sarcoidosis, which is a small subset of sarcoid, affects about five to ten per 100,000. The reason it's important to go to a center of excellence is because when you see many of these cases, and we have seen over 300 patients at Mayo with established cardiac sarcoidosis, you gain enough experience to inform decisions in an important way for your patients.

Treatment for sarcoid is absolutely individualized. For example, many patients will present with heart failure. They will need a heart failure expert in addition to someone who understands the immunology of sarcoidosis and can give immunosuppressive medicines. In contrast, there are patients who have no symptoms at all who present because they had sarcoid in the lung and they happen to have cardiac imaging test that revealed incidental and asymptomatic sarcoid. The management of that patient would be very different than a patient who had a severe advanced heart failure.

Overall, the number of patients diagnosed with cardiac sarcoid has gone up considerably in the last decade because of advanced imaging with cardiac MRI and PET scans. The patients who have most advanced disease, those with low ejection fractions of about 30%, let's say, still have a 5% per year risk of death or transplant and a 5% a year per year risk of serious arrhythmias. That statistic hasn't changed. What has changed is that the patients who are not as sick are now diagnosed much more frequently. Their prognosis is actually much better.

In addition to our descriptive registries, which we enroll all of our patients in, we have translational studies and clinical trials for management. For example, we are participating in a study called the IMAP study looking at whether an electrogram-guided heart biopsy is more accurate than a traditional heart biopsy. That is up and running currently.

We are also about to enroll in a trial that is funded to look at the use of methotrexate in addition to corticosteroids to prevent the serious consequences of cardiac sarcoidosis. Prednisone was discovered at the Mayo Clinic in the 1950s, and its use, in combination with other steroid-sparing agents, has been a focus of our clinical research for 20 years.

When patients come to Mayo Clinic for specific questions, such as the management of cardiac sarcoidosis, we want to address that question effectively and then return the patients back to their home communities for ongoing medical care. There may be a need for immunosuppression management or other specialized medical treatments which we would remain involved with. Usually, it's only for that specific question or that specific disorder.