

What is Acute Rheumatic Fever?

Acute Rheumatic Fever (ARF) is a condition that is triggered by a Streptococcus infection of the throat that causes the body to attack its own heart and heart valves. The strep infections are quite common and only a small number of people are susceptible to developing ARF. Unfortunately we have no way of knowing who is able to get ARF. It is felt that about 3% of the general population is susceptible to getting ARF. Damage to the heart is not caused by the Strep bacteria itself. Usually the Strep infections are quite mild. What happens is that as the body fights the Strep infection it develops antibodies (special chemicals that can destroy bacteria) to the strep bacteria. These antibodies then are used to kill the bacteria and direct the other body defenses in the fight against the Strep infection. In some people the heart muscle and valves have a very similar chemical appearance to Strep bacteria walls and if a Strep infection occurs, it triggers a response in the body to attack the heart tissue as well. This is why we are very careful to treat all Strep throat infections. Because, if the Strep bacteria is killed by antibiotics (like Penicillin) before the body has a chance to make antibodies, then damage to the heart will not occur.

Diagnosis of ARF is difficult at times. There is no specific blood test to know if a person has ARF. Doctors use a list of findings called the Jones Criteria (named after T. Duckett Jones in 1944) to help them make the diagnosis. This includes 1- Carditis (inflammation of the heart), 2-Polyarthritits (inflammation of several Joints), 3-Erythema Marginatum (an unusual rash seem with ARF), 4- Chorea (uncontrollable movements by the patient), 5- Sub cutaneous nodules. Also the history of fever and laboratory proof of Strep infection is important. Usually patients become quite ill when they develop ARF. They will have high fevers and very debilitating arthritis. What is unusual is that a joint may become very swollen and tender for a few days and then be fine. Usually more than one joint is involved. The heart aspect of this disease may not become apparent for weeks after the start of the disease. Doctors try to be very careful about diagnosing ARF because it has life long implications for the patient. A patient with ARF will need to take penicillin for the rest of his/her life and may have difficulty getting insurance.

The treatment of ARF is rather simple. We give antibiotics for 10 days to kill the Strep bacteria. Usually, this is Penicillin. We treat with high dose aspirin or steroids to decrease the inflammation (the process that damages the heart or its valves). We also suggest a lot of rest for the first 2-3 weeks after the attack. The most commonly affected heart valve is the Mitral valve, followed by the Aortic valve. Usually with a first attack the damage to the valves are not serious enough to need to replace the valve. However sometimes if the valve leaks enough we may need to replace it. Sometimes a patient may need to take medicine like Lasix and Digoxin to help the heart beat more effectively. Treatment with antibiotics is recommended until at least 18 years of age.

If you have any questions, please ask one of the doctors.