Inflammation in rheumatoid arthritis linked to cardiovascular disease mortality.

The March 2005 issue of *Arthritis & Rheumatism* (http://www.rheumatology.org/publications/ar) published the findings of Mayo Clinic epidemiologists that the body-wide inflammation of rheumatoid arthritis may be to blame for the increased risk of cardiovascular death in patients with the disease. Individuals with the disease have been shown to have a greater risk of dying of cardiovascular disease if they have large joint swelling, inflammation of the blood vessels (vasculitis), rheumatoid lung disease or a high erythrocyte sedimentation rate (ESR), which measures inflammation in the body.

Hilal Maradit Kremers, MD, and colleagues followed 603 Rochester, Minnesota residents diagnosed with rheumatoid arthritis between 1955 and 1995. Information on cardiac events, cardiovascular risk factors, indicators of systemic inflammation, and information concerning rheumatoid arthritis severity was collected, as well as data on the presence of additional diseases. The subjects were followed until death or January of 2001.

Three hundred fifty-four patients died during follow up, for which cardiovascular disease was the cause of death for 176. The risk of dying from cardiovascular disease was significantly higher among subjects who had experienced at least three elevations of ESR values, inflammation of the blood vessels, and rheumatoid lung disease, with the presence of any of these factors more than doubling cardiovascular mortality risk.

Although the precise mechanism by which the inflammation of rheumatoid arthritis causes heart disease is not known, the researchers believe that if the process is kept under control, cardiovascular mortality could be lowered.

Senior author and Mayo Clinic rheumatologist and epidemiologist, Sherine Gabriel, MD, commented, "Our previous research showed that rheumatoid arthritis patients have a higher risk of early death than others and that these deaths are mostly due to cardiovascular disease. We suspect that systemic inflammation promotes this risk. Our findings support this hypothesis."