

Heart monitor implant could save lives in patients with serious immune disease

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The results of a study presented today at the European League Against Rheumatism Annual Congress (EULAR 2016) showed that use of an easy to insert heart monitor in patients with systemic sclerosis (SSc) and no known heart disease enables early detection and treatment of potentially fatal cardiac arrhythmias. The findings support the need to identify SSc patients at risk of heart problems that would benefit from this implanted recorder.

SSc is an autoimmune rheumatic disease affecting multiple organs, including the heart. Damage to the heart as a direct consequence of SSc may involve the conduction system that controls the heartbeat, the heart muscle, heart valves and/or the external lining of the heart. Cardiac involvement is thought to be common in patients with SSc, although there are often no symptoms or signs.

"We know that cardiac involvement in Systemic Sclerosis (SSc) is associated with a very poor prognosis, accounting for between 14 and 55% of deaths among patients with SSc," , said Dr Lesley-Anne Bissell of the Musculoskeletal Biomedical Research Unit, University of Leeds, United Kingdom. "Early diagnosis and treatment to reduce the risk of complications is therefore essential and crucial for a positive outcome," she added.

This [heart monitor](#) (also known as an implantable loop recorder) is a subcutaneous, single-lead, electrocardiographic (ECG) monitoring device used to diagnose heart rhythm abnormalities. It is capable of

storing ECG data automatically in response to any significant change in heart rhythm, or in response to patient activation when symptoms are experienced. Its use is well established in cardiology practice.

The device, about the size of a pack of chewing gum, is typically inserted through a small cut to lie under the skin in the upper left chest. Electrodes that monitor the heart's electrical activity are on the surface of the device, so there are no wires, and the device is enclosed in a protective case. The procedure is performed under local anaesthetic and takes 15-20 minutes.

In this pilot study, the heart monitor picked up a variety of heart rhythm abnormalities in more than half of the cohort of 19 SSc patients, including supraventricular ectopics, ventricular ectopics, ventricular tachycardia and complete heart block. Cardiac Magnetic Resonance imaging data available for 15 of these SSc patients showed markers of cardiac damage that significantly correlated with these [heart](#) rhythm abnormalities.

Provided by European League Against Rheumatism

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