

Introduction

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Connective tissue diseases are chronic inflammatory diseases of unknown causes that can potentially affect all systems of the body. Their clinical courses are characterized by periods of remission and chronic or acute relapses (*Firenstein, 1997*).

Cardiac involvement may occur in any component including the valves, myocardium, pericardium or conducting system (*Buttle et al., 1993*).

The incidence of cardiovascular morbidity and mortality in systemic lupus erythematosus is rising and is now the third leading cause of death in systemic lupus erythematosus specially in late onset and account for 26% of deaths in systemic lupus erythematosus (*Saklatvala and Buttle, 1992*).

In systemic sclerosis there are wide spread vascular involvement and fibrosis of internal organs (*Black and Stephen's, 1993*). In systemic sclerosis there may be diastolic function abnormality either due to myocardial ischaemia or myocardial fibrosis or both (*Miaione et al., 1991*).

Among different causes of death in patients with rheumatoid arthritis; increased mortality from heart failure as reported in many studies (*Vabntinig et al., 1996*).

In rheumatoid arthritis cardiac diseases is often silent and is rarely a severe life threatening complication cardiac failure is the result of either systolic or diastolic dysfunction or both. This dysfunction is interstitial fibrosis (*Apstein and Berly, 1998*).



Echocardiography is a major diagnostic advance, its immediacy, relative cheapness and lack of side effects have made it valuable to clinicians. It uses ultrasound to image the heart and great vessels. A transducer containing piezoelectric ceramic, which interconverts electrical and mechanical energy functions both as a transmitter of sound and as the receiver of reflected waves (*Come et al., 1991*).

Echocardiography is undoubtedly the method of choice for demonstrating pericardial fluid, it also permits recognition of cardiomyopathy. Now it's the most sensitive and specific non invasive method for diagnosing valvular disease (*Come et al., 1991*).