Intruduction

Introduction

Systemic lupus erythematosus (SLE) is a prototypic autoimmune disease characterized by the production of antibodies to the components of cell nucleus in association with a diverse array of clinical manifestations.SLE shows a strong familial aggregation with a much higher frequency among first degree relatives of patients **(Klippel et al., 1997)** .

Osteoporosis is a disease characterized by low bone mass, micro-architectural deterioration of bone tissue and consequent skeletal fragility with an increase in fracture risk. It is a chronic disease that progresses silently for decades until characteristic feature occur late in life **(Sambrook et al., 1998).**

Epidemiological studies performed on premenopausal women with. (SLE) demonstrate that these patients have. lower bone mineral density as compared to age-matched controls. This is explained in part by the underlying disease and in part by treatment with glucocorticoids (GC) **(Franchimont and Canalis ., 2003).**

Patient at risk of osteoporosis can now be identified by measurement of bone mineral density (BMD) and effective prevention and restorative therapies are available **(Sambrook et a1.,1998).**

The technology of dual-energy x-ray absorptiometry (DEXA) incorporates an x-ray tube and attenuation of two different energies of photon fluxes by soft tissue and bone are used to calculate the (BMD), because it is more accurate and precise, DEXA has largely supplemented the older isotope-based techniques of SPA and DPA. Newer DXA techniques make it possible to measure bone density of spine or femur rapidly in 0.5 -2.5 minutes **(Uaratanawongs et al., 2003).**