INTRODUCTION

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Juvenile rheumatoid arthritis (JRA) is a chronic inflammatory multisystem disease with prominent joint manifestation *(Argyropoulou et al., 2002).* It's the most common rheumatic disease of childhood *(Lang et al., 1995).*

The different classification criteria used around the world overlap and make comparability of genetic, serologic, epidemiologic and therapeutic data difficult, and less reliable *(Merino et al., 2002).*

The knee was found to be the most commonly affected joint in JRA and in many ways accounts for the most disability *(El Miedany et al., 2001).*

Clinical parameters at the beginning of the disease are shown to be extremely useful in predicting the articular outcome of JRA. Therefore, they could constitute a good instrument to help clinicians tailor the best the therapy for their patients *(Modesto et al., 2001).*

Clinical evaluation of symptomatic joints is frequently supplemented with plain radiographs. However, radiographic changes mostly represent late and indirect signs of synovial disease *(Kaye, 1990).*

In addition, early detection of the joint involvement would allow the treating doctor to interfere in the proper time and use the suitable medications *(Lee et al., 1997).*

Based on these facts and on limitations of plain radiographs in detecting radiologic changes, there was a real need for other radiological variables to assess joint affection in patients with arthritis *(Pinals et al., 1981).*

The development of high frequency, high resolutional real time musculoskeletal ultrasonography(US) has revolutionized imaging of the rheumatic diseases ***(Balint et al., 2001).***

Ultrasonography has considerable advantages over other imaging methods including non invasiveness, repaidity of performance, relatively low cost, ability to scan multiple joints, repeatability and high patient acceptability ***(Naredo et al., 2006).***