SUMMARY AND CONCLUSION

SUMMARY AND CONCLUSION

Finger tendon involvement is a common feature of both the early and late stages of RA. The true frequency of such involvement is difficult to assess because of the lack of standarized diagnostic criteria ***(Grassi et al., 1995).***

Ultrasound examination is non-invasive, highly accurate, not expensive and allow longitudinal follow up. It has been the subject of many studies, but little has been reported about its role in assessing tendon involvement in RA, and its potential value in rheumatologic practice is still largely understimated ***(Fonage, 1989).***

This study designed to evaluate the ultrasonographic pattern of finger tendon involvement in RA by use of a high frequency. 10 MHz, sector transducer, 20 rheumatoid patients diagnosed according to the criteria of the American College Association and 15 healthy person as a control group, all members of the 2 groups are submitted to ultrasonographic examination of the tendons of the hand. The results of our investigation demonstrate that both extensor and flexor tendons of the fingers were clearly depicted in RA patients and in healthy controls. Although there is no agreed-upon system for evaluating or grading ultrasound features of finger tendon involvement in RA, our findings provide convincing evidence of potential value of ultrasonography.

In we also found increased incidence of synovial sheeth widening, tendon margin irregularity and loss of normal fibrillar echotexture and longer disease duration and presence of erosive changes in x-ray hand and increase duration of morning stiffness.

The high magnification and resolution of 10-MHz transducer enable to accurate assessment of even minimal tendon abnormalities and allow a careful assessment of the inner structure of the tendon, which is characterized by fibrellar echoes. Several different types of subtle or marked tendon alterations were clearly documented in our study. These include tendon sheeth widening, loss of normal fibrillar echotexture, tendon margin irregularity, synovial cyst, rheumatoid nodule and tendon tear.

The possibility of artifacts should always be kept in mind when assessing sonographic images because echostructural features of all tendons are angle-dependent and even minimal changes in ultrasonic beam incidence can produce striking modifications ***(Crass et al., 1988).***

The main limitation of our sector transducer is the small field of view because the beam is, for the most part, oriented obliquely in relation to the longitudinally oriented tendons. New linear array transducers with very high frequencies are now becoming available, and thus the quality of the images and the spatial resolution of superficial structures such as finger tendons will improve.

In conclusion, our results show that ultrasonography using a 10-MHz transducer accurately detects finger tendon abnormalities in patients with RA. The appropriate indications for ultrasound examination and its influence on the clinical approach, disease monitoring, and costs of care of patients with RA cannot be established by the present study. However, it appears correct to consider ultasonography as a valuable method for detecting and characterizing finger tenosynovitis, and for better evaluating the indications for synovectomy or other surgical procedures.

Finally, ultrasonography may have a role in the assessment of response in therapeutic trials. Although finger tendon ultrasonography requires further development and clinical testing, we believe that it can be regarded as a very promising tool in rheumatologic practice.

Yet, routine ultrasonographic examination of rheumatoid patient is recommended to detect early affection of the tendons.