**Abstract**

**Background:** Rheumatoid arthritis is a chronic inflammatory disease that mainly affects the joints of the hands and feet. Its main feature is persistent inflammation and joint damage that causes them to lose their function.

**Aim:** The aim of this study was to evaluate the sonographic findings of tenosynovitis and tendonitis in the dorsal surface of patients with early and late rheumatoid arthritis in patients referred to Imam Khomeini Hospital in Ardabil.

**Materials and Methods:** In this cross-sectional study, patients with rheumatoid arthritis who referred to the rheumatology clinic of Imam Khomeini Hospital in Ardabil during 1398 and 1399, were included in the study and were divided into early and late groups based on the duration of diagnosis. Patients' demographic information, clinical and laboratory findings were entered in the checklist, then patients underwent dorsal hand ultrasound and sonographic findings were recorded. After studying the data, the data were entered into the software and analyzed.

**Results:** The onset of the first manifestations of the disease was in 50% of patients under 12 months. 85% of patients were female. The mean age of patients was 47.24 13 13.16 years. The age of patients in the two groups was statistically significant (p = 0.03). The most common complaints of patients with joint pain and the most common joint involved were the joints of the fingers. Polyarthritis was the most common form of conflict. The mean score of pain intensity of late rheumatoid arthritis was higher.Tendonitis and tenosynovitis were more common in patients with early rheumatoid arthritis.

**Conclusion:** According to the results of this study, ultrasound seems to be a suitable tool for diagnosing tenosynovitis and inflammation in the early stages of the disease, and by considering its advantages such as non-invasiveness, low cost and availability, it can be used to identify joint damage in the early stages of the disease.

**Keywords:** Rheumatoid arthritis, Tendonitis, Tenosynovitis