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Comparison of Clinical Disease Activity Index (CDAI) and Disease Activity Score 28 (DAS 28) as composite measures to assess the disease activity in patients with Rheumatoid Arthritis (RA) in Sri Lanka

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Assessment of disease activity in Rheumatoid arthritis is crucial in its management as it helps the physician to assess therapeutic response for prescribed drugs retrospectively and also to decide the prospective treatment adjustments. DAS 28 is a routinely used popular composite tool to assess disease activity in RA globally. But the need of ESR/CRP for its calculation and the complex nature of the calculation have limited its use. CDAI is gaining popularity for disease activity assessment in RA as it depends only on clinical parameters for its calculation. It is not a validated tool for the evaluation of disease activity of RA patients in Sri Lanka. The objective of this study was to investigate the relationship of CDAI and DAS 28 in order to find out whether CDAI can also be used like DAS28 for assessment of disease activity of RA patients in Sri Lanka.

A group of 60 newly diagnosed RA patients attending the rheumatology clinics at the Teaching hospital, Peradeniya and Rehabilitation hospital, Digana were recruited. Baseline disease activity was assessed using DAS 28 score and CDAI. They were started on DMARDs subsequently and reviewed after 9 months at their regular clinic visit to reassess the disease activity using the same tools.

Of the total patients included, the majority were females (n = 53, 88.3%). The age range of the sample was 25-69 years (mean- 51.17 years) and had mean disease duration of 7.7 months. Mean DAS 28 at baseline and at 9 months were 5.93 ± 1.05 and 3.192 ± 1.04 respectively. Mean CDAI at baseline and at 9 months were 27.09 ± 11.04 and 6.8 ± 6.43 respectively. The Pearson's correlation co-efficient showed a statistically significant ($p<0.0001$) correlation between CDAI and DAS 28 at the base line ($r = 0.8640$, figure 1) and at 9 months ($r = 0.8990$, figure 2). There was a "moderate" agreement between the disease activity categories based on DAS 28 and CDAI cut off levels (at first visit- weighted Kappa = 0.511, at 9 months- weighted Kappa= 0.443)

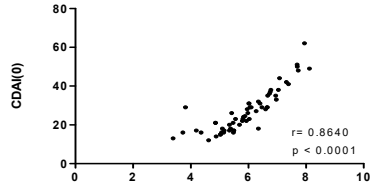

Figure 1

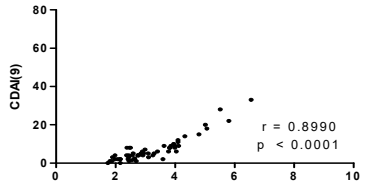

Figure 2

CDAI is a valid and more feasible tool to assess the disease activity in RA patients in Sri Lanka.