Abstract

Rheumatoid arthritis (RA) being a chronic disabling disease causes physical, psychological, social and economic impacts for patients and their families. Physical impacts may be due to distressing symptoms of RA such as pain in joints and morning stiffness which last even more than an hour. It also leads to many radiographic changes in such as osteopenia, periarticular erosions, soft tissue swelling, loss of joint space and subluxation. In addition to them it also affects other systems causing extra articular manifestations of the disease and also many patients have independent comorbidies as well as conditions caused by treatment or disease itself. Rheumatoid arthritis is frequently associated with functional disability due to destructive nature of the disease and status of disease activity. Health related quality of life (HRQL) is often affected and leads to poor physical, psychological, social as well as economic impact.

The objectives of this study were to determine the health related impact among RA patients seeking care at the teaching hospitals in the district of Colombo and to describe economic impact for their households. In order to determine the health related impact Arthritis Impact Measurement Scale 2 – SF (AIMS2-SF) was validated to the Sri Lankan context for the study setting.

The Sinhala version of the AIMS2-SF was validated in a consecutive sample of 146 RA patients seeking care at the Rheumatology and Rehabilitation Hospital, Ragama by establishing judgmental validity, construct validity as well as reliability. The Sinhala version of the AIMS2-SF was identified to be a valid and reliable instrument for the study setting with a reasonable convergent and discriminant validity, adequate internal consistency (Chronbach's alpha exceeding 0.7 except for symptom component which was 0.615) with an excellent test – retest reliability (exceeding 0.8 in all components). Convergent and discriminant validity was assessed using relevant subscales of Short Form -36 questionnaire and showed good convergent validity (r= 0.442, 0.553and 0.825 for physical, symptom, affect components respectively) except for social interaction component (r= 0.264). These values were the highest in respective columns and rows of heteromethod block in MultiTrait-MultiMethod matrix except for social interaction component showing reasonable discriminant validity.

The study to determine impact was conducted in a stratified sample of 850 RA patients in four clinics at three teaching hospitals in Colombo. This study used self-administered

AIMS2-SF, two interviewer administered questionnaires and Disease Activity Score 28 (DAS 28) as study instruments. The overall response rate was 92.5%. The physical, symptom, affect, social and role components mean scores of the AIMS2-SF were 2.2±1.5, 3.8±2.4, 3.6±2.5, 3.6±2.1, 2.4±2.6 respectively indicating on an average reasonable health impacts in all dimensions. Prevalence of physical disability, quality of life in relation to symptoms, psychological disability, poor social interaction and working disability were 39.1%, 52.1%, 46.4%, 50.7%, 52.5% respectively. Mean disease activity score (DAS 28) was 3.6±1.2 in the present study and approximately 46% were with moderate disease activity at the time of the study.

Moderate to severe pain, age and presence of deformities significantly influenced the physical disability ($p<0.001$). Moderate to severe pain ($p<0.001$), education level; Ordinary Level (O/L) or higher ($p=0.01$) and presence of comorbidities ($p<0.05$) influence symptom score significantly. Psychological disability is significantly predicted by moderate to severe pain ($p<0.001$), presence of deformities ($p<0.01$), education level; O/L or higher ($p<0.01$), extra articular manifestations of rheumatoid arthritis ($p=0.01$) and among currently married ($p=0.05$). Social interaction among participants were significantly influenced by moderate to severe pain ($p< 0.001$), presence of deformities ($p< 0.001$), O/L or higher education ($p< 0.001$), duration of diagnosis more than 2 years($p< 0.001$) and for presence of comorbidities ($p<0.01$). Moderate to severe pain ($p< 0.001$), age ($p< 0.001$) and presence of extra articular manifestations ($p<0.01$) significantly predicted working disability.

This study shows that 2.4% of participants changed their jobs and 12% abandoned their jobs due to RA during the course of it. Proportion of direct cost in this study sample was approximately 96%. In this sample of patients treatment cost (costs for health professional visits, hospitalization and illness related costs like medicines, laboratory investigations, obtaining technical aids and other daily needs) due to disease such as domestic help) was approximately 79 % out of the total cost incurred by households. Travelling cost per clinic visit incurred by household was 14.2% out of the direct cost incurred. Seventy percent of households of study participants were with cost burden of more than ten which is considered as catastrophic and leads to increase poverty.

It is concluded that RA causes functional disability, poor health related quality of life and great economic impact among the Sri Lankan patients seeking care in government

teaching hospitals in the district of Colombo. Many socio demographic and disease related factors predicted HRQL among them.