

[FRI0068] CONTRIBUTIONS OF SOCIAL DETERMINANTS OF HEALTH ON REMISSION IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Treatment responses vary among rheumatoid arthritis (RA) patients. There is limited evidence on the contribution of social determinants of health (SDH) to treatment responses and disease outcomes in RA.

Objectives: This study aimed to determine the contribution of social determinants of health (SDH) to remission in RA.

Methods: Data were collected from the Ontario Best-practices Research Initiative (OBRI) Rheumatoid Arthritis Registry, a clinical registry of early and established adult RA patients followed in routine care. Treatment response at 6 and 12 months was assessed by the 2011 ACR/EULAR Simple Disease Activity Index (SDAI) and Clinical Disease Activity Index (CDAI) remission criteria. The SDH assessed include patient demographics, socioeconomic status, health behaviors, living condition, marital status, and depression. Variables with a $p < 0.2$ in univariate analyses were included for multivariable regression. The association between SDH and remission was evaluated by logistic regression, controlling for baseline clinical RA confounders such as RA duration and baseline RA medications, presence of X-ray erosion, antibody status, extra articular features, baseline disease activities, and functional disability. All statistical analyses were performed in SAS9.4.

Results: Among 2209 patients with baseline CDAI, 1832 and 1583 reached the 6- and 12-month follow-up, respectively. Among 1778 patients with baseline SDAI, 1505 and 1286 reached the 6- and 12-month follow-up. At 6 months, 14.8% and 15.5% of the patients achieved CDAI and SDAI remission. At 12 months, 18.9% and 19.8% of the patients achieved CDAI and SDAI remission.

After adjusting for clinical confounders, higher neighborhood income was associated with 6-month CDAI remission (OR 1.04 per \$10,000; 95%CI 1.00–1.07), while having private insurance was associated with 6-month SDAI remission (OR 0.63 95%CI 0.40–0.99 for non-insurer). At 12 months, smoking and not living alone were both associated with CDAI and SDAI remission (CDAI: OR 0.65 95%CI 0.44–0.96 for non-smoker, OR 3.02 95%CI 1.27–7.15 for not living alone; SDAI: OR 0.62 95%CI 0.40–0.96 for non-smoker, OR 2.87 95%CI 1.11–7.40 for not living alone). Living in a rural community was also associated with SDAI remission at 12 months (OR 1.79 95%CI 1.12–2.86).

Conclusions: Socioeconomic factors appear to have an effect on remission at 6 months. Health behavior and living environment appear to be associated with remission at 12 months. Different SDH may affect treatment response and disease outcome at different time points and this study highlights the complexity in studying SDH.

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