Diabetes mellitus and cardiovascular risk management in patients with rheumatoid arthritis in a large international audit

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On behalf: SURF-RA collaborators

Topic(s):
Autoimmune/Chronic Inflammatory Disorders and Heart Disease

Background:
The cardiovascular disease (CVD) risk in patients with rheumatoid arthritis (RA) is comparable to that of patients with diabetes mellitus (DM). Although several studies have indicated high prevalence’s of DM in RA patients, little is known about how this affects their CVD risk.

Objectives:
To examine indications for, and use of antihypertensive treatment (a-HT) and lipid-lowering therapy (LLT) in RA patients with DM (RA-DM) and RA patients without DM (RAwoDM). Further, to compare the prevalence of various types of CVD across RA-DM and RAwoDM.

Methods:
The cohort was derived from the SUrvey of cardiovascular disease Risk Factor in patients with Rheumatoid Arthritis (SURF-RA), which was performed in 53 centres/17 countries in 5 world regions (West and East Europe; North and Latin America; and Asia) from 2014 - 2019. Indication for a-HT was defined as: 1) systolic/diastolic blood pressure (BP) ≥ 140/90 mm Hg, 2) self-reported hypertension, and/or 3) current use of a-HT. Indication for LLT was defined according to ESC guidelines. CVD risk estimates (by SCORE) were multiplied by 1.5 according to EULAR recommendations. Target treatment targets for BP and lipids were defined according to ESC guidelines applicable at the time data were recorded.

Results:
Presence of comorbid DM was available in 10 602 (73.1%) of the 14 503 RA patients included in SURF-RA, of whom 75 and 1262 patients reported DM type 1 and type 2, respectively (total 1337 patients, 12.6%). Although less often current smokers, RA-DM patients were more often previous smokers, male sex and had higher body mass index compared to RAwoDM (p<0.0001 for all). a-HT (84.7% vs 62.3%) and LLT (100% vs 47.2%) were more frequently indicated in RA-DM than in RAwoDM patients (p =0.0001 for both). RA-DM were more likely than RAwoDM to receive a-HT on indication (60.4% vs 57.6%, p<0.0001), while the difference in LLT use on indication was not significantly different (45.7% vs 42.5%, p = 0.06). Moreover, RA-DM compared to RAwoDM patients had more often reached treatment goals when on a-HT (60.7% vs 54.1%, p<0.0001) and LLT (62.8% vs 48.9%, p<0.0001). Finally, the risk of all recorded established CVD (coronary heart disease, stroke, peripheral artery disease and atrial fibrillation) was increased by a factor of 2 to 3 in RA-DM compared to RAwoDM (Figure).

Conclusion:
The effect of RA and comorbid DM on CVD risk appears to be additive. While CVD preventive medications are more often indicated in RA-DM than in RAwoDM patients, they are also more likely to receive such therapy and to reach CVD preventive treatment goals. The latter finding may be due to more developed CVD preventive care in DM compared to RA patients. Improved CVD preventive systems for patients with RA are warranted.
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Methods: The cohort was derived from the SUrvey of cardiovascular disease Risk Factor in patients with Rheumatoid Arthritis (SURF­RA), which was performed in 53 centres/17 countries in 5 world regions (West and East Europe; North and Latin America; and Asia) from 2014 - 2019. Indication for a-HT was defined as: 1) systolic/diastolic blood pressure (BP) ≥ 140/90 mm Hg, 2) self-reported hypertension, and/or 3) current use of a-HT. Indication for LLT was defined according to ESC guidelines. CVD risk estimates (by SCORE) were multiplied by 1.5 according to EULAR recommendations. Target treatment targets for BP and lipids were defined according to ESC guidelines applicable at the time data were recorded.

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*CVD cardiovascular disease, RA rheumatoid arthritis, DM diabetes mellitus, PAD peripheral artery disease