AB1657 TIME-DEPENDENT CSDMARDS USE AND INFLAMMATORY BURDEN CAN PREDICT CARDIOVASCULAR RISK IN PATIENTS WITH ANKYLOSING SPONDYLITIS: A POPULATION-BASED STUDY

Keywords: Cardiovascular disease, Prognostic factors, Disease-modifying drugs (DMARDs)

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Background: It is well established that AS patients had a higher risk of cardiovascular disease (CVD) than the general population.1,2,3. To date, there is no primary studies directly addressing the relationship between risk factors and MACE in population-level study.

Objectives: To examine whether inflammatory burden and drug use over time increase major adverse cardiac events (MACE) independent of traditional cardiovascular (CV) risk factors in ankylosing spondylitis (AS) patients.

Methods: Patients who had been diagnosed with AS (ICD-9: 720.0) from 2006 to 2015 were recruited in a retrospective cohort study. They were followed until the end of 2018. The primary outcome was a first incidence of MACE. Time-varying Cox proportional hazard models were used to assess whether inflammatory burden (c-reactive protein [CRP] and erythrocyte sedimentation rate [ESR]), and drug use (non-steroidal anti-inflammatory drugs [NSAIDs] and disease-modifying anti-rheumatic drugs [DMARDs]) can predict the development of first MACE.

Results: Totally 3827 patients (age: 45.2 ± 15.0 years, male: 2911 [76.1%]) were recruited. 135 patients (13.2%) developed a first MACE. ESR level (including ESR≥20 mg/dl and ESR≥30 mm/h, HR: 2.07-2.41), CRP level (including CRP≥3 mg/dl, HR: 1.20-8.77) and use of steroid (HR: 3.48) were associated with a significantly higher risk of MACE during follow-up. Whereas the use of sulfasalazine (SZA), bDMARDs and TNF inhibitors (OCP) were associated with reduced risk of MACE. After adjusting for time-fixed CV risk scores in the multivariable models, only ESR level (including ESR≥20 mg/dl, HR: 1.02-1.94) and CRP level (including CRP≥3 mg/dl, HR: 1.14-5.43) remained significant predictor for increased risk of MACE, while SLZ (HR: 0.41-0.52) was protective against MACE.

Conclusion: Increased inflammatory burden was associated with increased risk of MACE, while the use of SLZ may reduce risk of future MACE in patients with AS.

REFERENCES: