DOES TNF-α ANTAGONIST REDUCE RISK OF MYOCARDIAL INFARCTION FOR PATIENTS WITH RHEUMATOID ARTHRITIS?

Daryl L. Yeo1 and Xuan Yong Lee1
1Undergraduate Department, Manchester Royal Infirmary, Manchester, UK

Background: RA is a systemic chronic inflammatory condition that creates a pro-atherogenic state, increasing patients’ risk of myocardial infarction (MI). TNF-α plays a major role in stimulating this inflammatory reaction. It is hypothesized that TNF-α antagonists have a secondary role in reducing MI. A literature review was done to investigate if TNF-α antagonists reduce the risk of MI in RA patients.

Methods: A literature review was conducted to evaluate if TNF-α antagonists reduce the risk of MI in RA patients. The database of choice was PubMed, and the search terms included rheumatoid arthritis, myocardial infarction, TNF-α and TNF-α antagonist. A cohort study, cross-sectional study, and four case–control studies were reviewed.

Results: The BSRBR cohort study showed that overall, patients did not show a reduction in the risk of MI (incidence rate 1.44, 95% CI 0.56, 3.67), when compared with patients using traditional DMARDs. However, responders to anti-TNF therapy have a significantly lower incidence rate of MI compared with non-responders (incidence rate 0.36, 95% CI 0.19, 0.69). The QUEST-RA study revealed that prolonged anti-TNF therapy could reduce MI by 58% compared with non-DMARDs (hazard ratio 0.42, 95% CI 0.21, 0.81). A case–control study showed MI risk reduction of 80% for anti-TNF and MTX combination vs MTX monotherapy (RR 0.8, 95% CI 0.05, 0.88).

Conclusion: TNF-α antagonists have been proved to show benefits in specific CVD risk factors such as dyslipidaemia, insulin sensitivity and endothelial dysfunction. This review suggests that anti-TNF treatment may benefit in MI incidence reduction. However, more studies focusing at responders to anti-TNF therapy will be required to strengthen this association.

Disclosure statement: The authors have declared no conflicts of interest.