VASCULAR FUNCTION AND OCULAR INVOLVEMENT IN SARCOIDOSIS

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Vascular Medicine: A Potpourri
Abstract Category: 32. Vascular Medicine: Non Coronary Arterial Disease
Presentation Number: 1213-75

Authors: Gerasimos Siasos, Theodore Paraskevopoulos, Dimitris Tousoulis, Elias Gialafos, Evangelos Oikonomou, Marina Zaromitidou, Stamatios Kioufis, Konstantinos Maniatis, Georgia Siasou, Nikolaos Gouliopoulos, Eleni Kokkou, Savvas Mazaris, Theodosia Konsola, Christodoulos I Stefanadis, University of Athens Medical School, 1st Cardiology Department, "Hippokration" Hospital, Athens, Greece

Background: Sarcoidosis (Sar) is a multisystemic inflammatory disease. It has been shown that Sar patients have impaired endothelial function, augmented arterial stiffness and increased inflammatory status. Ocular involvement occurs in 15-25% of Sar patients mainly in the form of uveitis. The study was designed to determine if uveitis as a manifestation of ocular Sarcoidosis is associated with an extensive vascular dysfunction, as a result of a stronger inflammatory process.

Methods: We enrolled 62 Sar patients and 62, age and sex matched, control subjects (Cl). Sar patients were divided in those with ocular Sarcoidosis (OS) (23 patients) and in those without ocular Sarcoidosis (WOS) (39 patients). Endothelial function was evaluated by flow-mediated dilatation (FMD). Carotid-femoral pulse wave velocity (PWV) was measured as an index of aortic stiffness and augmentation index (AIx) as a measure of arterial wave reflections.

Results: Although there was no significant difference in sex, age and mean arterial pressure, patients with OS compared to WOS patients and Cl subjects had impaired FMD (4.48±2.38% vs. 6.46±1.92% vs. 8.30±3.47%, p<0.001), increased AIx (25.00±8.79% vs. 17.99±10.99% vs. 13.76±10.76%, p=0.001) and increased PWV (8.48±2.25 m/sec vs. 7.00±1.12 m/sec vs. 6.85±1.51 m/sec, p<0.001). Logistic regression analysis, after adjustment for possible covariates (such as age, sex, smoking habits, the presence of arterial hypertension, diabetes mellitus, dyslipidemia and the treatment with cortisone), revealed that impaired FMD in Sar patients was independently associated with increased Odds of ocular involvement [Odds ratio=0.64, 95%CI(0.43, 0.95), p=0.03]. More precisely ROC curve analysis revealed that FMD had a significant diagnostic ability for the detection of OS (AUC=0.73, p=0.002) and a FMD value below 4.95% has a modest sensitivity (61%) and a significant specificity (80%).

Conclusion: In the present study we have shown that Sar patients with ocular sarcoidosis have impaired endothelial function and increased arterial stiffness. These results strengthens the vascular theory considers uveitis a consequence of vascular dysfunction in Sar patients.