Inflammation begets isolated atrioventricular conduction disturbances in young an observation from Indian registry data

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Background: High grade AV block is less commonly encountered in patients <60 years. The aetiological role of inflammatory conditions is not well studied in this group of patients.

Purpose: To determine the prevalence of myocardial inflammation in young patients presenting with High grade AV block and assess its response to immunosuppression.

Methodology: This is a prospective, registry based, observational study conducted at two centers from Jan 2020 to Dec 2021. Myocardial inflammation was detected using Cardiac PET, and/or histopathological examination. Those with evidence of inflammation were started on graded immunosuppression.

Results: 318 patients were enrolled. Mean EF was 55.2±7.0%. Cardiac PET was performed in 87/318 (27.3%). Myocardial inflammation was seen in 57/87 (65%). LV basal septum was most commonly involved. 44/57 (77%) were started on immunosuppressive therapy after excluding indolent tuberculosis. 8 patients died during follow-up with all deaths being sudden in nature. 5/44 (11.3%) had reversal of CHB with resolution of cPET findings.

Conclusion: Significant proportion of young patients with High grade AV block have segmental myocardial inflammation. Immunosuppression helps restore AV conduction in some of these patients. Long-term studies are required to assess adverse impact of inflammation on cardiac contractile function.