Title: Genetic Variants Associated With Atrial Fibrillation and PR Interval Following Cardiac Surgery.

Abstract: The authors hypothesized that genetic association between atrial fibrillation (AF)-associated and PR-associated genetic loci was biologically mediated through slower conduction velocities for some or all of these loci. Prospectively collected cohort study. Single tertiary care university hospital. A total of 1227 Caucasian patients who underwent coronary artery bypass grafting (CABG). A total of 677 single nucleotide polymorphisms previously associated with ambulatory AF or PR interval were tested for association with postoperative atrial fibrillation (poAF) and preoperative PR interval, maximum PR interval, maximum change in PR interval, and maximum change in PR interval from preoperative PR interval. The incidence of new-onset poAF was 31%. All of the PR interval variables were longer in the poAF cohort. Two variants on 1q21 and 12 on 4q25 were associated with poAF after adjustment for false discovery rate (FDR), but no variants were associated with PR interval variables after adjustment for FDR. Several variants were associated with both poAF and PR interval variables at p<0.05, but none of them remained significant after adjusting for FDR. It was found that patients with poAF have significantly longer PR interval. Genetic variants in both the 1q21 and 4q25 regions.
associate with poAF after CABG surgery, but the authors were unable to find association between these variants and PR interval after adjusting for FDR.

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