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A SINGLE NUCLEOTIDE POLYMORPHISM IN MYOSIN HEAVY CHAIN 11 GENE IS ASSOCIATED WITH AORTIC DISSECTION

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Objective To investigate the impact of the myosin heavy chain 11 gene (Rs1050113) polymorphisms on aortic dissection.

Methods Genomic DNA was isolated from blood of 107 patients with aortic dissection, and 110 control patients. The genotypings of four myosin heavy chain 11 single nucleotide polymorphisms (rs1050113, rs1050162, rs880071 and rs1050111) were determined by using single-base primer extension assays. Associations between polymorphisms and disease were estimated with odds ratios and their 95% CI.

Results The frequency of the rs1050111CC was significantly higher in patients with aortic dissection (88.7%) compared to control (77.3%, $p<0.05$). The frequency of the rs1050162AA was significantly higher in patients with MACE (33.3%) compared to no MACE (7.7%, $p<0.05$). There were no significant correlations between the rs1050113, rs880071 polymorphisms and thoracic aortic disease.

Conclusions The myosin heavy chain 11 polymorphism is associated with aortic dissection. Further studies are warranted to elucidate the functional role of the rs1050111 and rs1050162 variant in myosin heavy chain 11 expression.