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Association between MRP2 Genetic Variations and in Stent Restenosis of Paclitaxel Eluting Stents

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Associations between polymorphisms in the multidrug resistant protein 2 (MRP2) gene and the in-stent restenosis of paclitaxel eluting stents were investigated in this study. Using a gene scanning method, 12 polymorphisms and mutations were found in the MRP2 gene in the Korean population. Individual variations at these sites were analyzed by conventional DNA screening in 106 patients with symptomatic coronary artery diseases who underwent paclitaxel eluting stent insertion. Among the MRP2 genetic variations, −1774Gdel polymorphism showed a strong association with the higher angiographic stent restenosis rate (P=0.001). A multivariate logistic regression analysis revealed that the presence of −1774Gdel was independently associated with the increased risk of restenosis (OR=8.347, P=0.007), and its contribution was much higher than those identified previously, such as diabetes and smoking. These findings suggest that genetic testing of MRP2 can be used an important index for predicting the response of paclitaxel eluting stents.

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