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OBJECTIVES

Our prevenient study found that Buchang Naoxintong Capsules (BNC) showed obvious increase effect on the catalytic activities of drug metabolism CYP2C19 enzyme. BNC to clopidogrel can enhance the antiplatelet effect in volunteers with the CYP2C19*2 gene mutation.

OBJECTIVE

To evaluate the effect of the different doses of BNC combined with dual antiplatelet (DA) therapy on platelet function and clinical outcomes in patients with CYP2C19*2 undergoing percutaneous coronary intervention (PCI).

METHODS

A total of 240 eligible patients were enrolled and randomly divided into three groups with each consisting of 80 patients: DA group, the adjunctive small-dose BNC (SBNC) group (0.8 g, thrice per day) and adjunctive regular-dose BNC (RBNC) group (1.6 g, thrice per day). All groups received DA therapy for at least 9 months while SNDA and RNDA groups received BNC after PCI for 3 months. Platelet function was assessed at baseline and 7 d after treatment with conventional aggregometry. The adverse cardiovascular events (readmission because of unstable angina or progressive angina, acute myocardial infarction, cardiovascular death) and bleeding events were recorded.

RESULTS

Baseline platelet function measurements were similar among the three groups. Compared with DA group, percent inhibitions of maximum platelet aggregation (IPA_{max}) 7 days after treatment were significantly greater in the SNDA and RNDA groups (31.22±15.20% or 39.91±13.45% vs 22.26±15.51%, p<0.01, respectively). IPA_{max} in the RNDA group were higher than those in the SNDA group (p<0.01). Incidence of adverse cardiovascular events in the SNDA and RNDA groups was lower than those in DA group (13.8% or 10.0% vs 31.2%, p<0.01, respectively), incidence of adverse cardiovascular events did not significant difference between the SNDA and RNDA groups. The bleeding events did not differ among the three groups.

CONCLUSIONS

Compared with DA therapy, adding BNC to DA therapy could strengthen inhibition of ADP-mediated platelet aggregation in a dose-dependent manner.

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