Application of different doses of atorvastatin in percutaneous coronary intervention treatment during perioperative period

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To evaluate the value of different doses of atorvastatin in percutaneous coronary intervention (PCI) treatment during perioperative period. Methods: A total of 120 CHD patients scheduled for PCI treatment were randomly divided into control group (group A), low-dose intervention group (group B) and middle-dose intervention group (group C). Group A didn't take atorvastatin during perioperative period, while group B and C took atorvastatin at doses of 20 and 40 mg, respectively for 7 days before undergoing the surgery. All the three groups were given postoperative atorvastatin 20 mg/d as maintenance therapy. Monitor CK-MB, C-reactive protein, troponin I, and serum creatinine 24 hours before and after the surgery as well as 1 month after the surgery. Results: (1) The CK-MB, C-reactive protein increased 24 hours after the PCI treatment in all groups, but the increase was significantly different in group A than that in group B and C ($P < 0.05$), significant difference in increases of CK-MB, C-reactive protein was observed between group B and C 1 month after the surgery ($P < 0.05$), though no similar result was shown before ($P > 0.05$). (2) Group B and C showed lower incidence of perioperative MI than group A, but the difference was not statistically significant ($P > 0.05$) (3) Changes in serum creatinine level were not significant in all three groups ($P > 0.05$). Conclusions: The postoperative increase of CK-MB, C-reactive protein suggests occurrence of PCI related myocardial damage; taking atorvastatin for 7 days before undergoing CPI treatment can inhibited this damage to some extent as well as produce renal protective effects.

[KEY WORDS] Atorvastatin, Percutaneous coronary intervention, Myocardial protection