

Abstract

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Immunohistochemical detection of endothelial dysfunction in hypertensive rats

Bachelor thesis

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Background: We observed the expression of endothelial eNOS synthase in right femoral artery in the spontaneously hypertensive rats and normotensive WKY rats after Sunitinib treatment.

Methods: We used the male SHR and WKY rats. Each strain of the rats were divided into two groups, one of which received sunitinib and second just water (control). Both SHR and WKY rats were treated in with following design 8 weeks/5 days pause/8 weeks. . Immunohistochemical analysis was performed in right femoral artery by means of En Vision method with DAB detection.

Results: Immunohistochemical analysis showed the expression eNOS only in luminal endothelial cells. Sunitinib treatment did not affect the expression of eNOS in right femoral artery in SHR rats. On the contrary sunitinib treatment decreased the expression of eNOS in normotensive WKY rats.

Conclusions: Sunitinib treatment did not induce immunohistochemically detectable endothelial dysfunction represented by changes of eNOS expression in right femoral artery in hypertensive and normotensive rats. It is an experimental study in which it is plan to test other markers in the future which should describe effects of sunitinib in the vessel wall.