Experimental Study of Hypovolaemic Shock-Induced Gastric Mucosal Lesions in the Rat

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Abstract

This study was designed to determine whether oxygen-derived free radicals play a role in the pathogenesis of gastric mucosal lesions produced by haemorrhagic shock and reperfusion experimental model in the rat. Ranitidine (H2-receptor blocker) in different doses, allopurinol, an inhibitor of xanthine oxidase and SOD (superoxide dysmutase) pre-treatment were used against haemorrhagic shock and reperfusion induced gastric mucosal lesions. Altogether 67 rats were divided into seven different groups. The area of gastric mucosal lesions was measured, the activity of endogenous peroxidase was examined histochemically and histological grading was made. Evans blue was used to demonstrate the improved permeability of gastric mucosal membranes.

Ranitidine, in high dose, allopurinol and superoxide dysmutase significantly protected against haemorrhagic shock-induced gastric mucosal lesions, against improved membrane permeability and peroxidation.

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