

Increased resistance against oxidative stress is observed during a short period of renal reperfusion after a temporal ischaemia

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Reperfusion of rat kidney submitted to temporal ischaemia induces a decrease in glutathione content. Lipid peroxidation is not detected in kidney homogenates but microsomes obtained after periods of reperfusion longer than 60 minutes show increased malondialdehyde values correlated with high oxygen consumption and superoxide free radical generation. Microsomes obtained from kidneys submitted to 15 or 60 minutes of reperfusion are resistant to NADPH-induced lipid peroxidation but after 120 minutes of reperfusion an increased lipid peroxidative response is observed. Although the mechanism of the protection found in microsomes against the induction of oxidative stress in the first 60 minutes of reperfusion is unknown, it is postulated that this subcellular fraction plays an important role in the oxidative stress observed after longer periods of reperfusion.

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