Different glutathione redox status and lipid peroxidation in the cortex and the medulla of the rat kidney subjected to ischemia-reperfusion stress

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When the rat kidney is subjected to ischemia and reperfusion, changes in glutathione content and in lipid peroxidation are produced in the cortex and in the medulla. The cortex shows a decrease in the glutathione content and a higher sensitivity to development of lipid peroxidation, the medulla being less affected. Reperfusion restores the glutathione concentration of the cortex during the first hours of reflow. The lipid peroxidation observed in the cortex and the medulla during reperfusion is higher than in ischemia. The protective role of glutathione and the response of the cortex and the medulla to ischemia-reperfusion injury are discussed. © 1993.