

OXIDATIVE STRESS IN HUMAN AORTAS FROM OCCLUSIVE AND ANEURYSMAL DISEASES.

Márcio Luís Lucas¹; Cristina C. Campos², Adriane Belló-Klein²; Antonio N. Kalil¹.

1. Curso de Pós-Graduação em Ciências da Saúde, Universidade Federal de Ciências da Saúde de Porto Alegre, RS, Brasil.
2. Laboratório de Fisiologia Cardiovascular, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brasil.

Introduction: Oxidative stress have been implicated in the atherosclerosis and development of aortic aneurysms. **Objective:** We evaluated the role of reactive oxygen species (ROS) and antioxidant enzymes in human aortas from patients with abdominal aortic aneurysm (AAA) or abdominal aortic occlusive disease (AO). **Material and methods:** Demographic and risk factors of 30 patients (16 with AO and 14 with AAA) submitted to aortic surgery were revised and their aortic samples were homogenized and analyzed for reactive oxygen species (ROS) levels, NADPH oxidase, superoxide-dismutase (SOD), and catalase (CAT) activities, as so as tissue levels of nitrites. We performed exact Fisher test for risk factors analysis and Student's t test for others variables. **Results:** NADPH oxidase activity and ROS levels were higher in the AO group when compared to AAA group ($p < 0,05$). Nitrites tissue levels also higher in the AO group ($0,099 \pm 0,073$ vs $0,045 \pm 0,02$ mM⁻¹; $p < 0,05$). Furthermore, SOD activity was higher in the AAO group, while CAT activity was higher in the AAA group. **Conclusions:** Oxidative stress was more relevant in patients with aortic occlusive disease than with aortic aneurysmal disease. Besides, antioxidant enzymes seem to express themselves differently in these two groups of aortic pathologies, being the SOD more important in the occlusive disease and CAT more relevant in the aneurysmal group.

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E-mail apresentador: mlucasvascular@hotmail.com