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Title: Assessment of inflammatory biomarkers and oxidative stress in pulmonary thromboembolism

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Body: Introduction: Pulmonary thromboembolism (PTE) is a preventable disease charecterized by diagnostic difficulties with high mortality and morbidity rates. Failure in pulmonary circulation cause inflammation and oxidative stress. In the present study we aimed to investigate inflammatory markers, ADMA levels and the oxidant-antioxidant balance in patients with PTE. Materials&Methods: This study was conducted as prospective case control study. Thirty eight patients with the diagnosis of PTE enrolled to the study. Healthy subjects were selected as control group. Venous blood samples were obtained from PTE patients during initial diagnosis and at the first month of treatment and from control subjects and IL6, TNF-α, TAS, TOS and ADMA levels were measured in biochemistry labarotory. Results of patients and healthy subjects were compared. Results: Thirty eight patients (F/M: 17/21) with the diagnosis of PTE between 2010 and 2012 followed in our clinic and 38 healthy subjects (F/M: 17/21) were recruited to the study. While we found significant differences between patient and control groups in terms of IL6, TNF-α, TAS, ADMA and OSI values ($p=0.001$; $p=0.038$; $p=0.008$; $p=0.028$; $p=0.024$ respectively), TOS values were not different between groups ($p=0.65$). ADMA, IL6, TNF-α, TAS, TOS and OSI values of patients during initial diagnosis and at first month treatment were not different ($p>0.05$). Discussion: The results of this study indicate increased inflammation, endothelial damage and oxidative stress in PTE. No difference at the first month of therapy suggests ongoing processes. We consider that these markers may be useful in the diagnosis of PTE.