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VALUE OF D-DIMER FOR DETECTION OF ACUTE AORTIC DISSECTION

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Objectives The purpose of this research was to assess the value of several plasma biomarkers in the detection of acute aortic dissection (AAD).

Methods From 2006 to 2011, 118 consecutive patients with established AAD, 94 consecutive patients with chronic aortic aneurysms scheduled for elective surgery in our hospital and 98 normal subjects were evaluated for plasma D-dimer, C-reactive protein (CRP) and N-terminal pro-B-type natriuretic peptide (BNP).

Results All AAD patients showed significantly higher elevated D-dimer values compared to both the chronic aneurysm patients as well as the normal subjects ($p < 0.0001$); A cut-off value of 850 ng/ml was effective in distinguishing AAD from the other two groups, with a sensitivity of 90% and a specificity of 62%. Plasma CRP and BNP values in AAD or chronic aortic aneurysms were much higher than in the normal controls ($p < 0.0001$ and $p = 0.0016$, respectively), but these parameters did not show significant differences between AAD and chronic aortic aneurysms ($p = 0.32$).

Conclusions D-dimer can be used as a 'rule-out' test in patients with suspected AAD and, unlike CRP and BNP, it seems could help making a differential diagnosis between AAD and chronic aortic aneurysms.