

# C-reactive protein (CRP) and aortic aneurysm: real-time PCR analysis

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## Objective

Whereas the etiopathogenesis of atherosclerotic disease still presents unknown factors related with its multifactorial features, the analysis of atherosclerotic lesions and arterial wall changes has allowed to disclose the role of enzymes (MMPs), acute phase proteins, cytokines and lipoproteins involved in atherogenesis. The possibility to use these factors as biological markers of atherosclerotic disease, certainly, leads to interesting therapeutic implications for the early diagnosis and surgical treatment follow-up. In recent experimental research, CRP is disclosed to be produced not only by liver cells, but also within the aortic aneurismatic wall.

Our research hypothesis rises from the question to verify if there exists an effective and valid relation between local CRP production and aortic wall lesions, such to make this protein a significant and predictive marker of aneurismatic disease.

## Material and methods

Intraoperative withdrawal of 2 aortic wall fragments in 8 patients: 4 from abdominal aortic aneurysm and 4 from ascending thoracic aorta. The fragments, stored in RNA-later, are subjected to analysis by real time PCR, CRP-RNA extracted from liver are used as a positive control.

## Results

In our analysis we observed CRP expression in 75% of fragments' adventitial side of abdominal aortic aneurysm and 100% of the adventitial side of the fragment of ATA.

## Conclusion

87,5% of the patients affected by aortic aneurysm that we analyzed expressed CRP at a lower level, this is more evident for the aneurismatic adventitial portion of aorta. These data confirm and improve the hypothesis of CRP expression in aneurismatic tissue.

