Reviewer’s report

Title: C-reactive Protein in Aortic Valve Disease

Version: 1 Date: 4 January 2006

Reviewer: Ivana I Vranic

Reviewer’s report:

General
The manuscript addresses an important issue regarding progression and development of aortic stenosis but the given title is inadequate since aortic valve disease incorporates pathology of prolapse, insufficiency and/or stenosis. Only the last one is being analyzed in this manuscript.

Also, there is confusion whether the type of the paper is review one (as proposed by authors) or research, since if it is a review it would never have newly research unpublished data as it was the case here; and from the other point of view if it was a research one it would lack obligatory scientific writing form with aim, methodology, study population, statistical methods applied, discussion and conclusion- having only new data as results section with two corresponding figures as well (no reference).

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. CRP is well known to be the acute phase ubiquitous nonspecific defense mechanism which has been highly conserved protein during evolution and as such has been playing a fundamental role in host defense system (1). Having came directly from Paleozoic (2) it may not be highly specific marker of existence or progression of AS disease as it was suggested here in this manuscript. However, "elevated CRP levels, whether preceding the development of degenerative valvular aortic stenosis or established at some time during the course of the disease, may have a detrimental influence on the natural history of the disease by inducing local activation of complement and subsequent amplification of local inflammation and cellular damage" (3) (Galante p 1081).

2. On the other side, endothelial dysfunction can not be extensively observed from the localized pathologic process in AS if not previously excluded from general arteriosclerosis as well established in FCRS (5). Also, to be objectively interpreted presented clinical studies in this manuscript must include all variables known to affect CRP results preanalytical and physiological such as: age, race, sex, season, biological variation, lifestyle (obesity, smoking, exercise, alcohol..), altitude, pregnancy, and also of importance concerning laboratory methodology (2).

3. Furthermore, mentioned clinical studies (3,4) (Galante, Gerber) are being misinterpreted stating that CRP is increased in all patients with AS, which is actually "often but not always", since some overlapping of CRP was observed between patients and controls (3). Authors are therefore missing the critical point of interpreting results (4) by presenting just one segment of the data from the literature (3) (Galante p 1131). Introducing dialysis in elucidating the issue does not contribute in explaining the relationship between facts found in literature...

However, considering good influence that statin and aspirin therapy might have in lowering CRP levels, (as assumed in literature) someone might conclude a possible beneficial effect in slowing the progression of AS disease as well. Thus, this paper merits attention but should be extensively revised before final decision on acceptance or rejection after the authors have responded to all the aforementioned remarks.
References:

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests