Reviewer's report

Title: Unfiltered signal averaged P wave analysis - further validation of the method

Version: 3 Date: 13 July 2007

Reviewer: Valentin Fuster

Reviewer's report:

General

General Comments: The ms. by Holmqvist et al deals with Signal-averaged P wave analysis for delineation of intraatrial conduction-further validation of the method. The authors studied 131 healthy subjects and another set of patients with heart disease were used as training set; however the results in these patients were not presented separately. Not surprisingly, the authors find that the duration of the P wave is dependant on methodology (i.e magnification, baseline filtering, band-pass filtering, duration of signal averaging and obviously the noise level. The findings are not at all surprising and indeed, expected. The authors use confusing terminology in particular intraatrial block rather then intraatrial conduction delay.

Specific Comments:

Under Background:
Ph 2, line 3: ‘in’ should be deleted.
Pg 2, line 5: ‘used’ should be deleted.
Pg 2, line 7: Prolongation of the P wave doesn’t reflect inter-atrial block but rather intra-atrial conduction delay.
Pg 7, under Discussion, line 6: again the authors refer to intraatrial block.
Pg 7, under Discussion, line 16: the authors use a value of 120 msec. to designate intra-atrial block. This reviewer disagrees with the use of such terminology. Indeed, the number 120 msec. may reflect abnormal value i.e prolongation of intraatrial conduction but in no way reflects block.
The ms. needs considerable editing and is cumbersome to read.

-------------------------------------------------------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

-------------------------------------------------------------------------------------------------------------------------------

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