Reviewer's report

Title: Profile of infective endocarditis observed over a 7-year period in a single centre in Italy

Version: 2 Date: 6 June 2013

Reviewer: Chris Duncan

Reviewer's report:

This is a generally well-written clear account of a single centre retrospective study of IE patients managed in an Italian hospital setting.

Major compulsory revisions:
The data on antimicrobial use were vague/sparse and could be strengthened. In particular, what antibiotics were used and did they influence outcome?
Furthermore, I am troubled by the analysis and conclusions on HIV patients. The vast majority were IDU and this is presumably the dominant factor in aetiology. Since these variables were so clearly linked, any analysis of the influence of HIV must be controlled for IDU status. Finally, I disagree with the interpretation that the incidence data show a “non-linear increase”. By eye, there is the suggestion of an increase only in non-IDU cases - but in any case apparent changes in incidence over time should be formally tested before drawing conclusions. The authors refer to the Cochran-Armitage trend test, which they presumably used, but the results are not explicitly reported.

Minor revisions:
Statistical analysis: the denominator for ‘incidence’ should be stated - all hospitalised patients?

Relapse/reinfection: since Staph. aureus cases predominated in the IDU population, it is not clear that a second clinical episode with S. aureus is necessarily a relapse. It could represent reinfection with a common organism. This should be addressed.

Results:
It is unclear how 8% of patients could be diagnosed with IE without echocardiography. Does this mean data on Echo could not be retrieved or that the patients never had an Echo? This should be clarified.

Penultimate paragraph: it is not clear how cause of death is broken down. Does 4/32 refer to just stroke or the total of all the preceding causes?

Discretionary revisions:
The authors could also consider testing whether specialist input in management (i.e. ID/cardiology) influenced outcome by multivariate analysis.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

None declared