Reviewer's report

Title: Clinical Manifestations and Outcome in Staphylococcus aureus Endocarditis Among Injection Drug Users and Nonaddicts - A Prospective Study of 74 Patients

Version: 1 Date: 13 February 2006

Reviewer: Stefano Bassetti

Reviewer's report:

General
This is an interesting manuscript on the characteristics and outcomes of a prospectively followed cohort of IDUs and non-IDUs with S. aureus endocarditis, who were included in a previous therapeutic study for S. aureus bacteremia.
The problem of S. aureus endocarditis is clinically relevant and is becoming increasingly important also because of the high incidence of S. aureus infections among IDUs.
The data are thoroughly presented and discussed, and underline the high frequency of endocarditis and of complications of endocarditis among IDUs with S. aureus bacteremia.

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)

I have following questions / comments:

1. The treatment of endocarditis in the study consisted of cloxacillin or dicloxacillin (or vancomycin/cefuroxime) + one aminoglycoside for the first 7 days + rifampin for at least 4 weeks +/- trovafloxacin or levofloxacin.
To my knowledge, there are no data supporting the treatment of a native valve endocarditis with an aminoglycoside for more than 3-5 days, or supporting a combination with rifampin. The authors should discuss this point.

2. The use of rifampin may be particularly problematic in IDUs receiving a substitution treatment with methadone (this is the case of almost all IDUs treated at our hospital for example), since the methadone dose needs frequently to be increased during the treatment with rifampin (because of the interactions between the two drugs), and needs to be again reduced after stopping of rifampin. Was that a problem in the study ? Was there a standardized protocol for the dosing of methadone in IDUs included in the study ? The authors should comment on this point.

3. The authors confirm that IDUs with S. aureus bacteremia have a high incidence of endocarditis. Unfortunately, because of compliance problems it is often more difficult to perform diagnostic examinations such as echocardiography (particularly TEE) on IDUs than on non-IDUs. What is the value of the number of positive blood culture bottles for S. aureus for diagnosing endocarditis in IDUs (i.e.: has an IDU with 4 / 4 positive blood cultures for S. aureus a higher risk of having
endocarditis than an IDU with only 2 positive blood cultures of 4) ? It would be very interesting if the authors could answer this question with the data they collected.

What next?: Accept after discretionary revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

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