Reviewer's report

Title: Stenotrophomonas maltophilia prosthetic valve endocarditis: Case report.

Version: 2 Date: 8 November 2007

Reviewer: Kyle Popovich

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: New associations or variations in disease processes

Has the case been reported coherently?: No

Is the case report authentic?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: No

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Comments to authors:

Has the case been reported coherently?

More details needed.

• Since a presumably unique feature of this presentation is the association with a peripheral catheter, I would want to know additional information about the length of time this catheter was in place and whether it was a peripheral intravenous line or a peripherally inserted central venous catheter. Additionally, in the discussion the authors stress that clinicians need to be aware of strategies aimed at preventing catheter-related infections. If the catheter in the case presentation was a central venous catheter, the purpose for this catheter in a healthy patient admitted for delivery may be useful in further supporting the author’s conclusion.

• The case discussion states that the patient developed symptoms three days postpartum. I would want to know if this was an uncomplicated delivery versus a more complex one with several complications and a prolonged hospitalization as this latter situation may allow for additional healthcare exposures that may serve as risk factors for infections with nosocomial pathogens such as S. maltophilia.

• The duration of the patient’s hospitalization prior to infection would be helpful to
further identify the case as community versus hospital-associated. Based on the
discussion, it appears that the symptoms developed 3 days postpartum. Had the
patient been in the hospital during those 3 days following delivery or had she
presented as an outpatient (in which case, why did she have a peripheral
catheter in place)?

- Additional details about the admission history, the diagnosis of a peripheral
catheter-related infection, and the echocardiography are needed in order to
provide a more convincing case presentation. The case presentation states that
the patient presented with a peripheral catheter-related infection. How was this
diagnosis was made, was it presumed or where there signs of a catheter
infection (i.e. phlebitis) when the patient presented? In addition, it is unclear at
what point in the hospitalization the echocardiogram was performed. Since a
repeat echocardiogram at day 8 was negative for vegetation, it can be inferred
that the initial echocardiogram was done early in the admission, in which case it
would be unusual for two vegetations to have developed so quickly. The size of
the two vegetations on the initial echocardiogram should also be noted.

Is the case report persuasive?
More details needed.

- Since the unique aspect of this case is the association of a peripheral catheter
with S. maltophilia bacteremia and subsequent prosthetic valve endocarditis,
additional details in the history need to be provided. I think that the authors’
conclusions about the importance of preventing intravascular device-related
bloodstream infections would be strengthened with the following additional
information: (1) reason for catheter insertion, (2) duration of catheter presence,
(3) duration of patients hospital stay for delivery, (4) method of diagnosing a
catheter-related infection, and (5) clarification of the onset of bacteremia (i.e.
community or hospital-associated).

Comments:

I think this is a very interesting case discussion of an infrequently seen condition.
The authors highlight the importance of early identification of S. maltophilia
infections since empiric antimicrobials for nosocomial infections often have no
activity against this pathogen. In addition, while 28 cases of S. maltophilia
endocarditis have been described previously, I think the unique feature of this
case, the association of S. maltophilia bacteremia and subsequent endocarditis
with a peripheral catheter, has significant implications.

In the discussion, the authors appropriately state that clinicians need to adhere to
published guidelines for preventing intravascular device-related bloodstream
infections. I would provide additional details in the case discussion about the
peripheral catheter for this patient (duration it was in place, reason for placement,
peripheral intravenous line versus peripherally inserted central venous catheter).
I would also underscore how concerning the case presentation is -- a relatively
healthy pregnant woman became febrile following delivery and developed what
was likely a hospital-acquired bloodstream infection with an unusual pathogen, an organism typically seen in immunocompromised hosts with prolonged hospitalizations, and that this infection likely arose from a peripheral catheter. Along these lines, if the line was a peripheral intravenous line, this would be a concerning aspect to this presentation. If the infection is due to a peripheral intravenous central catheter, one could ask why a healthy patient hospitalized for delivery had a central venous catheter. Overuse of these catheters could also be a point to emphasize.

**What next?:** Accept after minor revisions

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