

Accepted Manuscript

Does gender affect the outcome of community-acquired *Staphylococcus aureus* bacteraemia?

Evelina Tacconelli, Federico Foschi

PII: S1198-743X(16)30399-8

DOI: [10.1016/j.cmi.2016.09.011](https://doi.org/10.1016/j.cmi.2016.09.011)

Reference: CMI 723

To appear in: *Clinical Microbiology and Infection*

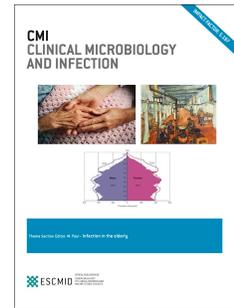
Received Date: 30 July 2016

Revised Date: 15 September 2016

Accepted Date: 18 September 2016

Please cite this article as: Tacconelli E, Foschi F, Does gender affect the outcome of community-acquired *Staphylococcus aureus* bacteraemia?, *Clinical Microbiology and Infection* (2016), doi: 10.1016/j.cmi.2016.09.011.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



1 **Does gender affect the outcome of community-acquired *Staphylococcus aureus***
2 **bacteraemia?**

3
4 Evelina Tacconelli and Federico Foschi

5 Infectious Diseases, Internal Medicine I, DZIF Center, University Hospital of Tübingen,
6 Tübingen, Germany

7 Address correspondence to Evelina Tacconelli, evelina.tacconelli@med.uni-tuebingen.de

8
9 Sex and gender play an active role in the incidence and outcomes of major infectious
10 diseases, including malaria, tuberculosis, HIV infection, hepatitis, and influenza.[1] Both
11 biological differences (e.g., hormonal cycles and cellular immune-mediate responses) and
12 cultural, behavioral, and socioeconomic differences are important determinants of course
13 and outcome of infectious diseases.[1] Given this background, we read with great interest the
14 study by Smit and colleagues exploring gender differences in outcome of *Staphylococcus*
15 *aureus* bacteraemia (SAB) in northern Denmark.[2] The authors used population-based
16 medical registers to analyse the outcome of community-acquired SAB in 2,638 adult patients
17 between 2000 and 2011.[2] The results, which had been adjusted for comorbidities and age,
18 suggest that gender has a significant impact on all-cause 30-day mortality with women
19 having a 30% higher risk than men. [2]

20
21 The association between gender and mortality risk has been investigated for hospital-
22 acquired infections , bacterial pneumonia, endocarditis, and sepsis with inconsistent results.
23 [3-11] Some authors reported that female gender independently predicts mortality [4-7, 11];
24 others found no association [8, 9, 12] or an increased risk for men. [10] Specifically for
25 sepsis, women appear to be at lower risk of developing the condition than men.[13] Angele et
26 al. reported evidence that dihydrotestosterone and high estradiol may be protective after
27 adverse circulatory conditions such as septic shock.[14] Studies in healthy volunteers
28 challenged with *Escherichia coli* lipopolysaccharide showed a gender difference in
29 immunological and cardiovascular response to the exogenous agent.[15]

30 Although women may be less likely to develop sepsis, if they do, their risk of death may be
31 distinctly worse. In an American cohort of 18,757 intensive care unit (ICU) patients, women
32 with severe sepsis had a higher risk of death than men.[5] A German cohort study of 3,902
33 patients from 24 medical or surgical ICUs, found a 2-fold higher risk of death in females
34 patients.[16] Two studies of SAB reported a significantly higher risk of 30-day and long-term
35 mortality in female patients.[6, 7] Conversely, two studies did not find any association. [12,
36 16] Adrie et al. in a cohort of 1,692 patients showed that women older than 50 years had a
37 31% lower mortality risk than men in the same age group. [16] The VIRSTA study was

Download English Version:

<https://daneshyari.com/en/article/5671475>

Download Persian Version:

<https://daneshyari.com/article/5671475>

[Daneshyari.com](https://daneshyari.com)