This is a repository copy of Sources of streptococcal bacteraemia and their implications for the diagnosis of infective endocarditis.

White Rose Research Online URL for this paper:
http://eprints.whiterose.ac.uk/118805/

Version: Accepted Version

Proceedings Paper:

https://doi.org/10.1136/heartjnl-2017-311726.134

© 2017, Abstract published by the BMJ Publishing Group Limited in Heart and uploaded in accordance with the publisher's self-archiving policy. This is an author produced version of a poster presented at the British Cardiovascular Society Annual Conference 2017: Cardiology at the Extremes.

Reuse
Unless indicated otherwise, fulltext items are protected by copyright with all rights reserved. The copyright exception in section 29 of the Copyright, Designs and Patents Act 1988 allows the making of a single copy solely for the purpose of non-commercial research or private study within the limits of fair dealing. The publisher or other rights-holder may allow further reproduction and re-use of this version - refer to the White Rose Research Online record for this item. Where records identify the publisher as the copyright holder, users can verify any specific terms of use on the publisher's website.

Takedown
If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.
SOURCES OF STREPTOCOCCAL BACTERAEMIA AND THEIR IMPLICATIONS FOR THE DIAGNOSIS OF INFECTIVE ENDOCARDITIS

Louis Baig ¹, Wazir Baig ¹, Jonathan Sandoe ²

Introduction
Robust confirmation of the microbiological cause of infective endocarditis (IE) requires demonstration of a sustained bacteraemia - multiple positive blood cultures being major criteria in the Duke nosology for IE. The interpretation of a single positive blood culture growing pathogens that could cause IE, but that do not fulfill major Duke criteria, is a common diagnostic difficulty in patients with a febrile illness. This study was designed to examine the clinical diagnosis in patients with streptococcal bacteraemias and the proportion with a final diagnosis of IE.

Methods
This was a retrospective descriptive analysis of patients with streptococcal bacteraemia between September-December 2012. IE was confirmed by a Consultant Microbiologist (JS) using the modified Duke criteria. The variables recorded were age, gender, number of blood cultures taken and the final diagnosis stated in the discharge summary.

Results
112 episodes were identified in 72 females and 40 males (mean age 40 years, range <1-97). The mean number of blood cultures was 2.57 (range1-12) and 85 (76%) patients had only one blood culture taken. The infections recorded are shown in Figure 1. The cause of the bacteraemia was not stated in 33 (29.5%) cases. Community acquired pneumonia (n=31) was the commonest infection, followed by catheter-related bloodstream infection (n=8) and then IE and soft-tissue infection (both n=7). Details of the streptococcal species are shown in Table 1 and the results have been divided using age less than or greater than 18 years. 50% of bacteraemias were caused by oral streptococci. IE was confirmed in only 7 (1.2%).

Conclusions
A significant proportion (12.5%) of oral streptococcal bacteraemias in adults are caused by IE – similar to the rate of IE in patients with S. aureus bacteraemia, where universal echocardiography is advocated. IE, and hence echocardiography, should be considered even if only one blood culture is taken and is positive with oral streptococci. Conversely, is uncommon in patients with S.pneumoniae blood cultures. High rates of single blood culture sampling (76%) may be an unintended consequence of the Surviving Sepsis campaign and earlier initiation of empirical antibiotic therapy earlier. Under these circumstances the reliability of the Duke criteria will be reduced. Ideally, patients at increased risk of IE still require multiple blood cultures if they have a significant pyrexial illness in order to determine if a sustained bacteraemia is present.