



This is a repository copy of *Letter by Thornhill and Dayer regarding article, "Risk of infective endocarditis after invasive dental treatment: a case-only study"*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/139534/>

Version: Accepted Version

Article:

Thornhill, M. orcid.org/0000-0003-0681-4083 and Dayer, M. (2019) Letter by Thornhill and Dayer regarding article, "Risk of infective endocarditis after invasive dental treatment: a case-only study". *Circulation*, 139 (1). pp. 140-141. ISSN 0009-7322

<https://doi.org/10.1161/CIRCULATIONAHA.118.035835>

© 2019 American Heart Association Inc. This is an author produced version of a paper subsequently published in *Circulation*. Uploaded in accordance with the publisher's self-archiving policy.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

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.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Letter by Thornhill and Dayer Regarding Article, “Risk of Infective Endocarditis After Invasive Dental Treatment: A Case-Only Study”

¹Martin Thornhill, MBBS, BDS, PhD. And ²Mark Dayer, MBBS, PhD

¹Department of Oral and Maxillofacial Medicine, Surgery and Pathology, University of Sheffield School of Clinical Dentistry, UK (M.T.).

²Department of Cardiology, Taunton and Somerset National Health Service Foundation Trust, UK (M.D.).

To the Editor:

We read with interest the article by Chen et al.¹ However, we have concerns about the underlying premise of this study and, in particular, the conclusions. Although the authors describe US and European antibiotic prophylaxis (AP) guidelines, they give no details about the guidelines that apply in Taiwan. We assume that they are similar to the American Heart Association guidelines.² However, the authors say that those with rheumatic heart disease are high-risk, suggesting that Taiwanese guidelines maybe more like those in Japan, where those at high risk and moderate risk of infective endocarditis (IE) are recommended for AP. It is disappointing the authors do not say which patients were considered high risk or provide the International Classification of Disease, Ninth Revision codes used to identify them. Similarly, they fail to say which International Classification of Disease, Ninth Revision codes were used to identify patients with IE, if they only included those with a primary IE diagnosis, or if they also included those with a secondary IE diagnosis. Such information is important in “big data” studies.

Far more important, however, one would expect that any link between invasive dental treatments and IE would be hidden or reduced in a setting where AP is the standard of care, if AP has any efficacy. The conclusion that “We also found no association between invasive dental treatments and IE among high-risk patients” is not, therefore, supported by the study because any association could have been reduced or hidden by the use of AP. Furthermore, the conclusion “Therefore, antibiotic prophylaxis for prevention of IE is not required” is unsupported by the results and potentially dangerous. Surely, in a country where those at risk of IE receive AP, the absence of any association between invasive dental treatments and IE is just as likely, arguably more likely, to prove that AP is effective in preventing IE. It is surprising that the authors make no mention of this and that it was not raised as a problem during the review process.

They authors may be correct that AP is not effective, but their study does not provide the evidence to draw that conclusion.

REFERENCES

1. Chen T-T, Yeh Y-C, Chien K-L, Lai M-S, Tu Y-K. Risk of infective endocarditis after invasive dental treatment: a case-only study. *Circulation*. 2018;138:356–363.
2. Wilson W, Taubert KA, Gewitz M, Lockhart PB, Baddour LM, Levison M, Bolger A, Cabell CH, Takahashi M, Baltimore RS, Newburger JW, Strom BL, Tani LY, Gerber M, Bonow RO, Pallasch T, Shulman ST, Rowley AH, Burns JC, Ferrieri P, Gardner T, Goff D, Durack DT; American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee; American Heart Association Council on Cardiovascular Disease in the Young; American Heart Association Council on Clinical Cardiology; American Heart

Association Council on Cardiovascular Surgery and Anesthesia; Quality of Care and Outcomes Research Interdisciplinary Working Group. Prevention of infective endocarditis: guidelines from the American Heart Association: a guideline from the American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee, Council on Cardiovascular Disease in the Young, and the Council on Clinical Cardiology, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Outcomes Research Interdisciplinary Working Group. *Circulation*. 2007;116:1736–1754. doi: 10.1161/CIRCULATIONAHA.106.183095