

Study authors call on NICE to change guidelines on antibiotic prophylaxis

Researchers have found evidence that supports the use of antibiotic prophylaxis to prevent a life-threatening heart infection in high risk dental patients – contrary to National Institute for Health and Care Excellence (NICE) guidance that recommends against its use in the UK.

An international study¹ published on 5 November 2018 in the *Journal of the American College of Cardiology* detailed what was described as the largest and most comprehensive research into the 2007 American Heart Association's (AHA) recommendations that antibiotic prophylaxis (AP) should continue to be given to patients at high-risk of developing infective endocarditis, but not to those at moderate-risk.

Infective endocarditis (IE) is a serious infection of the heart valves with high morbidity and mortality – it is estimated that 30% of people die within a year of being diagnosed. Previous studies have shown that approximately 40% of cases are likely to have been caused by bacteria from the mouth.

A large number of people with pre-disposing cardiac conditions are at increased risk of IE and some patients, eg those with prosthetic or repaired heart valves, previous history IE or certain

congenital heart conditions, are at high-risk of developing IE.

The new study, led by the University of Sheffield, showed a large fall in AP prescribing for those at moderate-risk of infective endocarditis (IE) (64%) since the change in the US guidelines in 2007.

However, it also identified a concerning fall in AP prescribing to those at high-risk (20%) – despite the AHA's recommendation that high-risk individuals should continue to receive AP before invasive dental treatment.

In parallel, the study also identified a significant increase in IE (177%) in those at high-risk, but only a barely significant increase in those at moderate-risk.

Lead author, Professor Martin Thornhill from the University of Sheffield's School of Clinical Dentistry, said: 'Although the data do not prove a cause-effect relationship between AP reduction and IE increase, they are very supportive of the AHA recommendation to give AP to those at high-risk but not to those at moderate-risk of endocarditis.'

'It also provides further evidence that the 2008 NICE recommendation that AP should cease completely in the UK, was probably wrong and should be changed.'

'Current NICE guidance on the use of AP to prevent IE is confusing and unhelpful for clinicians and patients, and probably

wrong. In the absence of clear and sensible advice from NICE, the recent attempt by the Scottish Dental Clinical Effectiveness Programme (SDCEP) to provide advice for dentists about how to implement the NICE guidelines – effectively suggesting they follow the AHA recommendations, is very welcome.'

Consultant cardiologist and co-author of the study, Mark Dayer from Taunton and Somerset NHS Trust, said: 'The recent implementation advice by SDCEP is a timely recognition that the patient has the right to be told the arguments both for and against prophylaxis and decide whether or not they wish to take it.'

'To my mind, the data in this study further supports the use of prophylaxis in patients at high risk of endocarditis, as recommended in America and across the rest of Europe.'

1. Thornhill M H, Gibson T B, Cutler E, Dayer M J, Chu V H, Lockhart P B, O'Gara P T, Baddour L M. Antibiotic prophylaxis and incidence of endocarditis before and after the 2007 AHA Recommendations (5 November 2018). DOI:10.1016/j.jacc.2018.08.2178. <https://www.sciencedirect.com/science/article/pii/S0735109718385103?via%3Dihub> (accessed on 5 November 2018).
2. Scottish Dental Clinical Effectiveness Programme. Antibiotic Prophylaxis Against Infective Endocarditis: Implementation Advice (August 2018). Available at <http://www.sdcep.org.uk/published-guidance/antibiotic-prophylaxis/> (accessed 4 November 2018).

CDO issues advice following EpiPen supply disruption

Dental practices are being advised to renew anaphylaxis kits with adrenaline ampoules not adrenaline auto-injectors (AAIs), following recent supply disruption of EpiPens.

England's Chief Dental Officer Sara Hurley has written to dentists in response to the disruption in the supply of EpiPen and EpiPen Junior adrenaline auto-injectors (AAIs).

The Department of Health and Social Care has said that eEpiPen and EpiPen Junior will be subject to limited availability for the remainder of 2018. Mylan are now out of stock of EpiPen Junior and interruptions in the supply are anticipated to continue for the coming months.

In the meantime, practices are being asked, when they renew the adrenaline in their



anaphylaxis kits that they order ampoules, ensuring this includes dosing charts, needles and syringes, and not AAIs.

This will reduce the reliance on AAIs and preserve essential EpiPen stocks for patients, parents, carers, teachers, who as lay persons cannot be expected to administer adrenaline via a needle and syringe, said the CDO.

Supplies of adrenaline ampoules are currently available and there is an expectation that dental practitioners should use these in preference to the EpiPen or similar devices.

All enquiries relating to this issue should be sent to the DH Supply Resilience Team at supplyresiliencemd@dh.gsi.gov.uk.