The Incidence of Infective Endocarditis in England is Increasing - An Assessment of the Impact of Cessation of Antibiotic Prophylaxis Using Population Statistics

Mark J Dayer, Taunton and Somerset NHS Trust, Taunton, United Kingdom; Simon Jones, Univ of Surrey, Guildford, United Kingdom; Bernard Prendergast, John Radcliffe Hosp, Oxford, United Kingdom; Larry M Baddour, Mayo Clinic Coll of Med, Rochester, MN; Peter B Lockhart, Carolinas Medical Ctr, Charlotte, NC; Martin H Thornhill, Univ of Sheffield Sch of Clinical Dentistry, Sheffield, United Kingdom

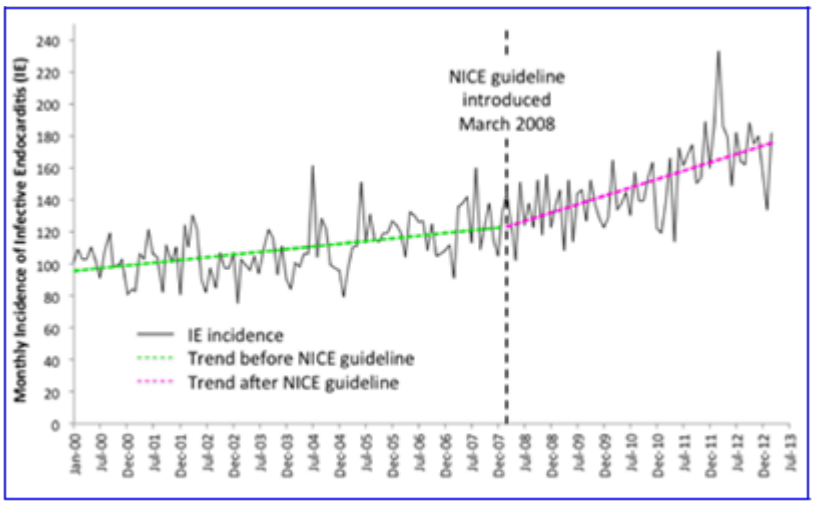
Introduction: Antibiotic prophylaxis (AP) at the time of invasive procedures in patients at risk of developing infective endocarditis (IE) has historically been the focus of IE prevention. Recent changes in IE prevention guidelines in the US and Europe have reduced by more than 80% the numbers for whom AP is recommended. The National Institute for Health and Care Excellence (NICE) guidelines recommended complete cessation of AP in the UK in March 2008. We report the impact of this on AP prescribing and describe the incidence of IE in England before and after implementation.

Hypothesis: We assessed the null hypothesis that reduction in AP prescribing would not be associated with an increase in IE incidence.

Methods: We used English AP prescribing data from January 2004 to March 2013 and hospital discharge episode statistics for patients with a primary diagnosis of IE from January 2000 to March 2013.

Results: AP prescription rates fell dramatically after introduction of the NICE guidance (10935 prescriptions/month vs. 2236 prescriptions/month, $p<0.001$). In the 6 months up to March 2013 the rate was even lower (1307 prescriptions/month). 29831 IE cases were recorded during the study period, with a significant increase in the number of cases/month above the baseline trend in IE incidence commencing in March 2008 (0.556 cases/month, CI 0.281-0.832, $p<0.001$, Figure). By March 2013 there were an additional 33 cases/month than would have been expected if the previous incidence trend continued. There was a significant rise in the rates of IE in both high risk and non high risk groups.

Conclusions: Since introduction of the NICE guidelines, there has been a substantial reduction in AP prescribing and a significant increase in IE incidence in England. A reappraisal of current strategies to prevent IE may be warranted.



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