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Effect of dispensing with antibiotic prophylaxis before dental treatment in patients with congenital heart disease: Analysis of 21 consecutive cases of infective endocarditis after the introduction of NICE guidelines in April 2008

*Wong J.K.B., Witter T., Rosenthal E.
Evelina Children's Hospital, London, UK*

INTRODUCTION: In 2008 the National Institute of Clinical Medicine (NICE) in the UK concluded that routine prophylaxis with antibiotics was no longer needed in patients with congenital heart disease (CHD) undergoing dental treatment. Since 2008 we have advised against prophylactic antibiotic cover for all CHD patients undergoing dental treatment.

METHODS: All patients presenting with endocarditis from April 2008 to November 2010 were identified and assessed for common risk factors including prior or remedial dental work and infecting organisms.

RESULTS: All 21 patients seen at our institution with infective endocarditis were included in the study. The underlying diagnoses were: unoperated perimembranous ventricular septal defect (4), Tetralogy of Fallot (3), double outlet right ventricle (3), coarctation of aorta (3), aortic stenosis (2); pulmonary atresia with ventricular septal defect (1), pulmonary stenosis (1), hypoplastic left heart syndrome (1), truncus arteriosus (1), atrioventricular septal defect (1) and structurally normal heart (1). A bicuspid aortic valve was present in 3 patients. An implanted pulmonary valve homograft was present in 5 (24%) of the patients. Organisms detected were: oral pathogens in 11, staphylococcus aureus in 4, nasopharyngeal commensals in 2, miscellaneous organism in 3 and culture negative in 1. In the 11 (52%) patients with endocarditis due to an oral pathogen, in only 1 (9%) was this related temporally to preceding dental work (without antibiotic prophylaxis). One child had spontaneously shed deciduous teeth and one had removal of a fixed brace (antibiotic prophylaxis not previously recommended). In four (36%) patients, severe caries or dental abscesses were found after the episode of infective endocarditis was diagnosed.

CONCLUSIONS: There has not been a noticeable increase in dental related episodes of IE since the change in guidance for antibiotic prophylaxis, as was feared by many, in the short time that the new guidelines have been in place. The need for high levels of dental hygiene, however remain, and will need greater emphasis now that our patients no longer carry antibiotic prophylaxis cards and are therefore not reminded as frequently as in the past. More prolonged review is required to confirm the appropriateness of the new policy.