

***Streptococcus bovis* bacteraemia: an evaluation of the long-term effect on cardiac outcomes**

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Abstract

Introduction *Streptococcus bovis* can lead to bacteraemia, septicaemia, and ultimately endocarditis. The objective of this study was to evaluate the long-term implications of *S. bovis* endocarditis on cardiac morbidity and mortality.

Methods A retrospective cohort study was performed between January 2000 and March 2009 to assess all patients diagnosed with *S. bovis* bacteraemia from the Belfast Health and Social Care Trust. The primary end-point for cardiac investigations was the presence of

endocarditis. Secondary end-points included referral for cardiac surgery and overall mortality.

Results Sixty-one positive *S. bovis* blood cultures from 43 patients were included. Following echocardiography, seven patients were diagnosed with infective endocarditis (16.3 % of total patients); four patients (9.3 %) had native valve involvement while three (7.0 %) had prosthetic valve infection. Five of these seven patients had more than one positive *S. bovis* culture (71.4 %). Three had significant valve dysfunction that warranted surgical repair/replacement, one of whom was unfit for surgery. There was a 100 % recurrence rate amongst the valve replacement patients ($n = 2$) and six patients with endocarditis had colorectal pathology. Patients with endocarditis had similar long-term survival as those with non-endocarditic bacteraemia (57.1 % alive vs. 50 % of non-endocarditis patients, $p = 0.73$).

Conclusion *Streptococcus bovis* endocarditis patients tended to have pre-existing valvular heart disease and those with prosthetic heart valves had higher surgical intervention and relapse rates. These patients experienced a higher rate of co-existing colorectal pathology but currently have reasonable long-term outcomes. This may suggest that they represent a patient population that merits consideration for an early surgical strategy to maximise long-term results, however, further evaluation is warranted.

Keywords Cardiac · Echocardiography · Endocarditis · *Streptococcus bovis* · Surgery

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Introduction

Streptococcus bovis (*S. bovis*) is a non-enterococcal group D streptococcus. It is a normal inhabitant of the intestinal