



Infective endocarditis managed through the national OPAT programme; a review from 2021 – 2023 at a single tertiary centre

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Background:

The national outpatient parenteral antibiotic therapy (OPAT) programme was formally established in 2013 and has successfully managed patients with a wide variety of infections. OPAT programmes are being increasingly used to manage uncomplicated cases of infective endocarditis as per defined criteria (IE).

We reviewed a cohort of patients treated for IE over a three year period (2021 – 2023) in a tertiary teaching hospital that shares access to specialist cardiothoracic and cardiology services.

We aim to describe the clinical epidemiology, definitive management and outcomes, interrogating the appropriate use of OPAT in these high risk infections.

Methods:

Data was collected and retrospectively analysed from the national OPAT portal using STATA/SE version 17.0. All patients with a recorded diagnosis of Infective Endocarditis were included. Data is presented as median (interquartile range).

Results:

During the three year period, there were 26 patients (aged 48 [38-58] years, 26.9% female) that were treated on OPAT for IE. Healthcare-OPAT (H-OPAT) was utilised in 18/26 (69.2%), 6/26 (23.1%) self-OPAT (S-OPAT) and 2/26 (7.7%) on co-OPAT.

Transoesophageal echocardiography was performed in 17/26 (65.4%) patients, 9/26 (34.6%) had a transthoracic echocardiography.

A native valve was infected in 18/26 cases (69.2%), and a bioprosthesis in 8/26 cases (30.8%). Where valve was known, 16/26 (69.6%) were left sided, with the majority, 10/26 (43.5%), involving the aortic valve. Overall, 14/26 (53.8%) subsequently underwent a valve replacement.

Organisms cultured include: methicillin-susceptible *Staphylococcus aureus* (7/27, 26.9%), *Streptococci [mitis, sanguinis]* (7/26, 26.9%), Coagulase-negative *Staphylococci [haemolyticus, epidermidis, capitus]* (4/26, 15.4%), *E. coli* (2/26, 7.7%), methicillin-resistant *Staphylococcus aureus* (1/26, 3.8%), and *Enterococci [faecalis, avium]* (1/26, 3.8%). There were 5 that were culture-negative.

The most commonly prescribed antibiotics were ceftriaxone (16/26, 61.5%) and daptomycin (6/26, 23.1%). Duration of treatment was 42 (42-42) days, with 22 (16.25-29.5) days of those on OPAT. There were 2 deaths in this cohort, the remainder achieved a cure.

Conclusion:

Almost 70% of all cases of infective endocarditis in our facility were left sided; however OPAT was still felt appropriate given high rates of cure achieved.

Factors which likely contributed to this success include a three week lead time of inpatient intravenous therapy, predominance of native valves and a higher utility of H-OPAT. A significant selection bias is present.

References:

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