

We analyzed a cohort of patients attended in an outpatient parenteral antimicrobial therapy program that has been working since 2012 in 2 tertiary hospitals” Gil-Navarro et al (2017).

Abstract:

WHAT IS KNOWN AND OBJECTIVE: Enterococcus faecalis is the third most common causal agent of infective endocarditis. Currently, the treatment recommended is a combination of ampicillin (2 g/4 h) plus ceftriaxone (2 g/12 h), so patients must remain hospitalized for almost 6 weeks to receive the treatment. They are not generally included in outpatient parenteral antimicrobial therapy programs because 2 different electronic pumps are required to administer these 2 antibiotics. To enable the treatment of patients with E. faecalis IE at home, we designed a continuation combination regimen of ceftriaxone 4 g once daily in a short infusion plus ampicillin 2 g/4 h using a programmable pump.

ReTweet if useful... Outpatient parenteral antimicrobial therapy treating infective endocarditis [@ivteam #ivteam](https://ctt.ec/3DqGV+)

Click To Tweet

METHODS: We analyzed a cohort of patients attended in an outpatient parenteral antimicrobial therapy program that has been working since 2012 in 2 tertiary hospitals. We selected patients attended in this program for E. faecalis IE treated with a continuation regimen of ampicillin 12 g daily (2 g/4 h) and ceftriaxone 4 g every 24 hours between July 2012 and March 2017.

RESULTS AND DISCUSSION: Of the 720 patients included in the outpatient parenteral antimicrobial therapy program, 42 had infective endocarditis, and 4 (9.52%) were treated using the combination regimen described above. All patients were men, and all had left-sided native-valve infective endocarditis. All 4 patients received ampicillin 2 g every 4 hours and ceftriaxone 2 g every 12 hours in hospital, for a median duration of 25 days (IQR 15-32). Thereafter, in the program, they received the following regimen: a 30-minute infusion of ceftriaxone 4 g in 250 mL of saline solution, followed by ampicillin 12 g daily in 500 mL of saline solution delivered by a pump programmed to administer 2 g every 4 hours. Patients received this treatment at home for a median of 22.5 days (IQR 13-32). All patients achieved

clinical and microbiological cure with no recurrences or complications after a lengthy follow-up period (median 365 days, IQR 221-406). No drug-related adverse events or problems with the pump system were reported.

WHAT IS NEW AND CONCLUSIONS: Use of ceftriaxone 4 g in a single dose yields a mean plasma concentration of 30 µg/mL. Ceftriaxone also has a high plasma protein binding capability, and once this binding is saturated, there is no reason to administer higher doses. Therefore, it seems reasonable to use a dose of 4 g of ceftriaxone once daily to have a synergist effect with ampicillin within the vegetation, and enable the treatment of patients with *E. faecalis* infective endocarditis at home. In conclusion, the administration of ampicillin (2 g/4 h) plus ceftriaxone (4 g/24 h) as a continuation regimen in an outpatient parenteral antimicrobial therapy program may be as effective and safe as the usual lengthy in-hospital regimen (ampicillin 2 g/4 h and ceftriaxone 2 g/12 h) in patients with *E. faecalis* infective endocarditis.

Reference:

Gil-Navarro, M.V., Lopez-Cortes, L.E., Luque-Marquez, R., Galvez-Acebal, J. and de Alarcon-Gonzalez, A. (2017) Outpatient parenteral antimicrobial therapy in *Enterococcus faecalis* infective endocarditis. *Journal of Clinical Pharmacy and Therapeutics*. October 13th. .

doi: 10.1111/jcpt.12635.

Thank you to our partners for supporting IVTEAM