

New treatment can halve hospital stays for some patients with heart infection

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A new treatment can halve hospital stays for some patients with a heart infection (endocarditis), according to late breaking results of the POET trial presented today in a Hot Line Session at ESC Congress 2018 and published in the *New England Journal of Medicine*.

The nationwide Danish POET trial examined if it was feasible and safe to shorten the duration of intravenous antibiotic treatment, and give the remaining antibiotics orally in some patients with endocarditis. After at least ten days of intravenous antibiotics, 400 clinically stable patients with endocarditis were randomly allocated to continued intravenous antibiotics or to [oral antibiotics](#). Patients in the oral antibiotics group were offered treatment as outpatients.

Professor Henning Bundgaard, principal investigator, of Copenhagen University Hospital, Denmark, said: "It is a huge challenge for patients to stay in hospital for up to six weeks receiving intravenous treatment, which is associated with an increased risk of complications. Reducing the length of hospital stay has improved outcomes in other diseases and oral antibiotics could be a safe way to achieve this."

Endocarditis is an infection of the inner lining of the heart (endocardium) and one or more heart valves. It is usually caused by bacteria entering the blood and travelling to the heart. Around 15-30% of patients die in hospital. Intensive care is sometimes needed, and up to half of patients require surgery to remove infected tissue and repair or replace infected [heart](#) valves. After the initial phase and after surgery

most patients are clinically stable and the main reason for staying in [hospital](#) is to complete up to six weeks of intravenous antibiotic treatment as recommended by guidelines.

Patients in the POET trial were followed-up for six months after antibiotic treatment had finished for the combined endpoint of all-cause death, unplanned cardiac surgery, embolic events, and reinfection.

After randomisation, intravenous or oral [antibiotics](#) were taken for a median of 18 days. During the six-month follow-up period, the primary endpoint occurred in 10.5% of patients without any significant difference between the two groups. This means that the non-inferiority criterion was met and a change to oral treatment was as efficient and safe as the conventional continued intravenous treatment for the whole period.

Professor Bundgaard said: "Shifting to oral antibiotic treatment in stabilised patients with endocarditis was as effective and safe as continued intravenous antibiotic treatment and was given during half the antibiotic [treatment](#) period. These novel findings may have a significant impact on future clinical practice for the management of [patients](#) who are stable."

More information: "POET - Partial oral treatment of left-sided infectious endocarditis" ESC Congress 2018.

Gilbert Habib et al. 2015 ESC Guidelines for the management of infective endocarditis, *European Heart Journal* (2015). [DOI: 10.1093/eurheartj/ehv319](#)

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