Oral Fosfomycin versus Ciprofloxacin for Febrile Urinary Tract Infection in Men: a pilot study

No registrations found.

Ethical review	Positive opinion
Status	Pending
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON25027

Source
Nationaal Trial Register

Brief title
FOS-MEN

Health condition

Febrile urinary tract infection in men

Sponsors and support

Primary sponsor: Haga Teaching Hospital
Source(s) of monetary or material Support: Haga Teaching Hospital

Intervention

Outcome measures

Primary outcome

The primary endpoint is the clinical cure rate 10-18 days post-treatment.

Secondary outcome

Test of Cure (10-18 days post-treatment):

" bacteriologic cure rate

" all-cause mortality

" adverse events

Late follow up (70- to 84 days post-treatment):

" clinical cure rate

" all-cause mortality

" relapse rate of UTI

Study description

Background summary

Rationale: Due to rising resistance of Enterobacteriaceae against the orally available antibiotics ciprofloxacin and trimethoprim-sulfamethoxazole, difficulties arise in the treatment of febrile urinary tract infection (FUTI) in men. Fosfomycin possesses a high bactericidal activity to Escherichia coli with resistance rates of 1%. Fosfomycin 3000mg, dosed every 24 hours, reaches sufficient antibiotic levels in urine, prostate and bladder, has good tolerability and is considered safe. Therefore, fosfomycin is a potential alternative antibiotic option for treatment of FUTI in men.

Objective: To determine the efficacy of oral fosfomycin in comparison to the standard of care oral ciprofloxacin, in the treatment of FUTI after initial empirical treatment with intravenous antibiotics.

Study design: An open label multicenter pilot study with historical controls.

Study population: Consenting men (≥18 years), on appropriate intravenous therapy for FUTI caused by E. coli and fulfilling criteria for an iv-to-oral switch.

Intervention: After an empirical intravenous antibiotic treatment an iv-oral switch to oral fosfomycin 3000mg, every 24 hours, up to 14 days. Patients will be compared to historical controls who were included in a randomized trial with similar inclusion criteria and who were treated with oral ciprofloxacin.

Eligible patients who refuse to be treated with fosfomycin, will be treated with ciprofloxacin. Those patients will be asked to participate in the trial for observational purposes only as they

can serve as control patients as well.

Main study parameters/endpoints: The primary endpoint is the clinical cure rate (resolution of symptoms) 10 to 18 days post-treatment (= test of cure, TOC). Secondary endpoints are clinical cure rate during late follow-up (LFU, 70 to 84 days post-treatment), microbiological cure rate, time to resolution of symptoms, rate of UTI relapse and rate of adverse events.

Nature and extent of the burden and risks associated with participation, benefit and group relatedness: The burden for participants is considered low as patients are treated and evaluated following Good Clinical Practice. This study is considered to be of low-risk for the following reasons; the pathogen causing FUTI has documented susceptibility to fosfomycin; patients are not acutely ill at the moment of randomization as they fulfil the criteria for iv-oral switch and fosfomycin has a good safety profile. Fosfomycin has been used extensively as single-dose oral therapy; previous studies have demonstrated a pharmacokinetic profile suitable for treating FUTI in men with a high bio-availability, reaching sufficient levels in urine, prostate and bladder wall. Clinical cure for FUTI has been described in case series. Overall the future benefit of this trial, obtaining a new antibiotic option for FUTI in men, outweighs the low risks involved for participants.

Study objective

Oral fosfomycin might be an effective antibiotic to treat men with febrile urinary tract infection caused by E. coli

Study design

2 time points: 10-18 and 70-84 days post-treatment.

Intervention

Men with febrile urinary tract infection who are admitted for empirical intravenous antibiotic treatment will be switched to oral fosfomycin for a total treatment duration of 14 days

Contacts

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Eligibility criteria

Inclusion criteria

1. Competent male patient aged 18 years or above

2. One or more symptom(s) suggestive of urinary tract infection (dysuria, frequency or urgency*; perineal or suprapubic pain; costo-vertebral tenderness or flank pain)

3. Fever (ear or rectal temp of 38.2 oC or higher, or axillary temp of 38 oC or higher), or history of feeling feverish with shivering or rigors in the past 24 hours

4. Positive urine nitrate test and/or leucocyturia as depicted by positive leukocyte esterase test or microscopy

5. Hospital admission for presumed FUTI and empirical intravenous antibiotic treatment with -lactams

6. Positive urine (> 103 CFU/ml) culture and/or blood culture with E. coli susceptible to fosfomycin, ciprofloxacin and the empirical intravenous -lactam treatment

7. Fulfilment of criteria for safe iv to oral switch (hemodynamic stability, ability to consume oral antibiotics, no gastrointestinal problems which affect absorption)

Exclusion criteria

1. Known allergy to fosfomycin or ciprofloxacin

2. Patients with known polycystic kidney disease

3. Patients on permanent renal replacement therapy (hemodialysis or peritoneal dialysis)

4. Patients with history of kidney transplantation

5. Patients with a permanent urinary catheter

6. Patients with chronic renal failure (eGFR < 30 ml/min/1.73m3)

7. Patients with renal abcess or pyonephrosis

8. Patients with chronic bacterial prostatitis (defined as recurrent UTI with the same uropathogen and no other clarifying underlying urological disorder)

9. Patients with any diagnosed metastatic E. coli foci

10. Patients with a double-J or nephrostomy catheter

11. Concomitant systemic antibiotic treatment for another reason than FUTI

12. Residence outside the Netherlands

13. Inability to speak or read Dutch

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	Active

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-06-2018
Enrollment:	30
Type:	Anticipated

Ethics review

Positive opinion

Date:	21-02-2018
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL6830
NTR-old	NTR7067
Other	Eudra-CT : 2017-004963-11

Study results