Background: Acute cystitis (AC) is common and one of the most frequent infections in women. We are currently conducting a randomized, double-blinded, placebo-controlled clinical phase IV study (EudraCTNo.: 2014-001321-32), to compare the efficacy of pivmecillinam 400 mg \textit{t.i.d} in a 3-day respectively 5-day regimen, against community acquired AC. We have earlier demonstrated effective outcomes of pivmecillinam 400 mg \textit{t.i.d.} against ESBL producing \textit{Escherichia coli}, and here we wish to confirm those findings with more detailed prospective data on seven cases with community-acquired AC caused by ESBL producing \textit{E. coli}.

Material/methods: We have to date included >275 patients (March 2017). Seven of the cases were caused by ESBL-producing \textit{E. coli}, similar to the prevalence in the primary sector of Denmark. Patients with clinical features of AC without exclusion criteria were included according to GCP. Dysuria, pollakiuria and urgency were scored from 0-3 on day 0, and a symptom load \textit{2} was considered significant for AC. The patients received a double-blinded antibiotic therapy \textit{(i.e. 3 or 5 day regimen of pivmecillinam)}, questionnaires for day 0-7 and day 28. The patients answered questions on their symptom load and bacteriuria with ESBL-producing \textit{E. coli}, and here we wish to confirm those findings with more detailed prospective data on seven cases with community-acquired AC caused by ESBL producing \textit{E. coli}.

Results:

Bacteriological data:

- Four of six patients with follow-up data were bacteriologically cured at the first control urine sample and without recurrence. One patient had early relapse AC and one patient still had asymptomatic bacteriuria, which vanished without antibiotic therapy. One patient had new bacteriuria in the second control urine (\textit{E. faecalis}). None had bacteraemia or relapse of bacteriuria with ESBL-producing \textit{E. coli} in the long-term follow-up.

Clinical data:

- All patients with follow-up data experienced high clinical efficacy during day 2 - day 7.

Conclusions: Pivmecillinam 400 mg \textit{t.i.d.} for 3-5 days was effective in patients with AC caused by ESBL-producing \textit{E. coli}. One patient experienced relapse on day 7, but was cured with a new pivmecillinam regime. We therefore confirm that pivmecillinam, given as 400 mg \textit{t.i.d.} is effective and a relevant option against ESBL-producing \textit{E. coli}.

Key words: UTI, pivmecillinam, ESBL