

Background

Previous studies reported that in a considerable proportion of pharyngeal gonorrhoea cases treated with extended-spectrum cephalosporins, the infection remains detectable after several weeks.

Objectives

- To examine the occurrence of persisting pharyngeal gonorrhoea positivity in NAAT (nucleic acid amplification test) after treatment with ceftriaxone at an outpatient clinic in Amsterdam
- To examine the determinants of persisting pharyngeal gonorrhoea positivity

Conclusions

- The rate of pharyngeal gonorrhoea positivity after antibiotics treatment with ceftriaxone was 5%
- Persisting pharyngeal gonorrhoea positivity was more often observed in those who were treated with ceftriaxone only, compared to those who were treated with combination therapy
- Treatment delay was marginally associated with persisting pharyngeal gonorrhoea positivity

Results

Table 1. Patients' characteristics and determinants of persisting pharyngeal gonorrhoea positivity

| Variables | Cleared cases (103) | | Persisting cases (5) | | p |
|---------------------------------------|---------------------|-----|----------------------|-----|------|
| | N | % | N | % | |
| Sex | | | | | |
| Male | 92 | 95 | 5 | 5 | 0.44 |
| Female | 11 | 100 | 0 | 0 | |
| Age group | | | | | |
| 17-24 years | 18 | 90 | 2 | 10 | 0.64 |
| 25-34 years | 33 | 97 | 1 | 3 | |
| 35-44 years | 30 | 97 | 1 | 3 | |
| >=45 years | 22 | 91 | 1 | 9 | |
| Had sex with anonymous partner | 8 | 80 | 2 | 20 | 0.02 |
| Unprotected oral sex | 100 | 95 | 5 | 5 | 0.69 |
| Notified of having STI | 36 | 92 | 3 | 8 | 0.26 |
| Had STI related complaint | 43 | 97 | 1 | 2 | 0.33 |
| Had STI co-infection | 66 | 97 | 2 | 3 | 0.28 |
| HIV positive | 20 | 100 | 0 | 0 | 0.28 |
| Treatment group | | | | | |
| Ceftriaxone only | 54 | 52 | 5 | 100 | 0.04 |
| Ceftriaxone & other antibiotics | 49 | 48 | 0 | 0 | |
| Treatment delay | | | | | |
| No delay | 61 | 59 | 1 | 20 | 0.08 |
| Delayed | 42 | 41 | 4 | 80 | |

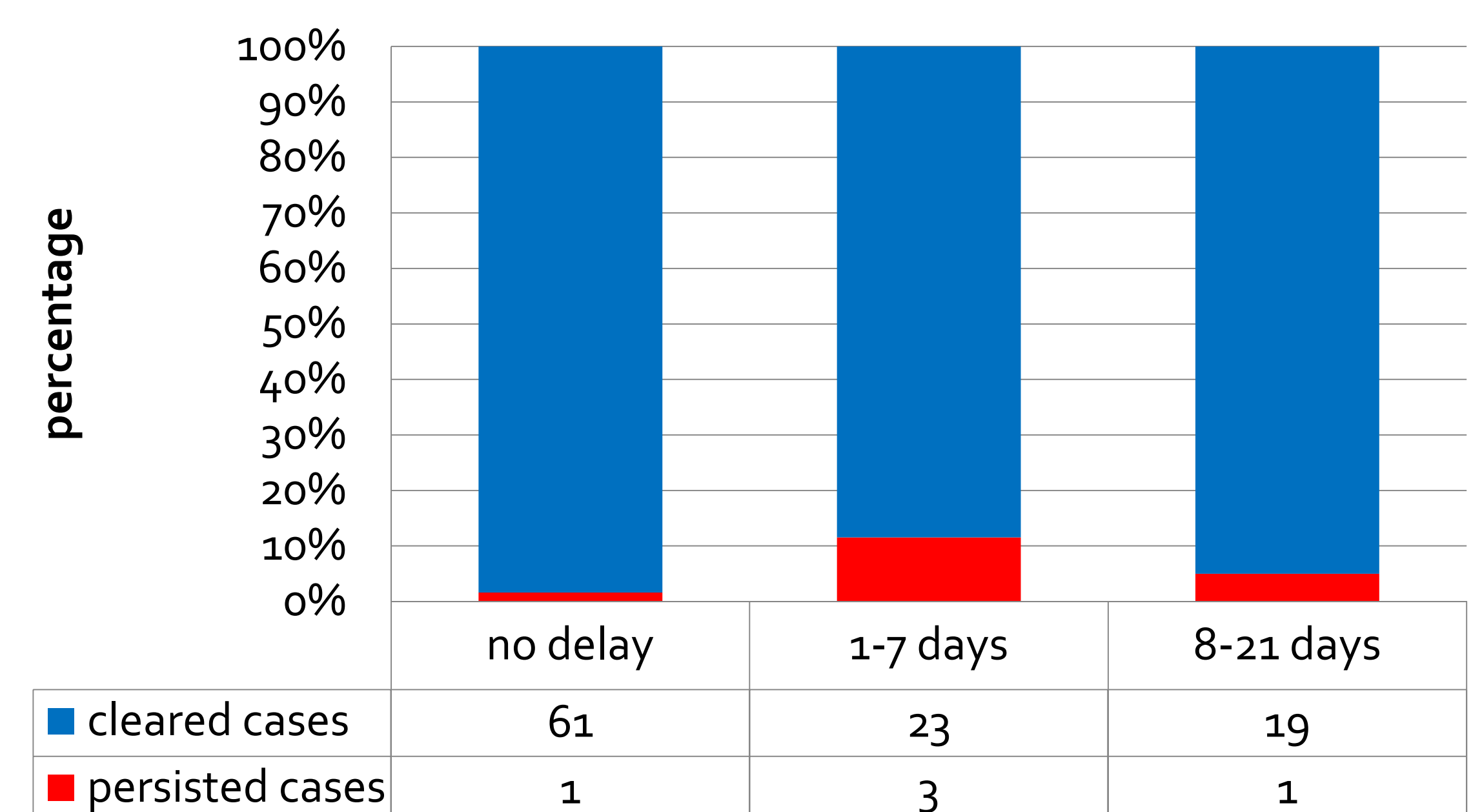


Figure 1. Proportion of persisting cases by treatment delay

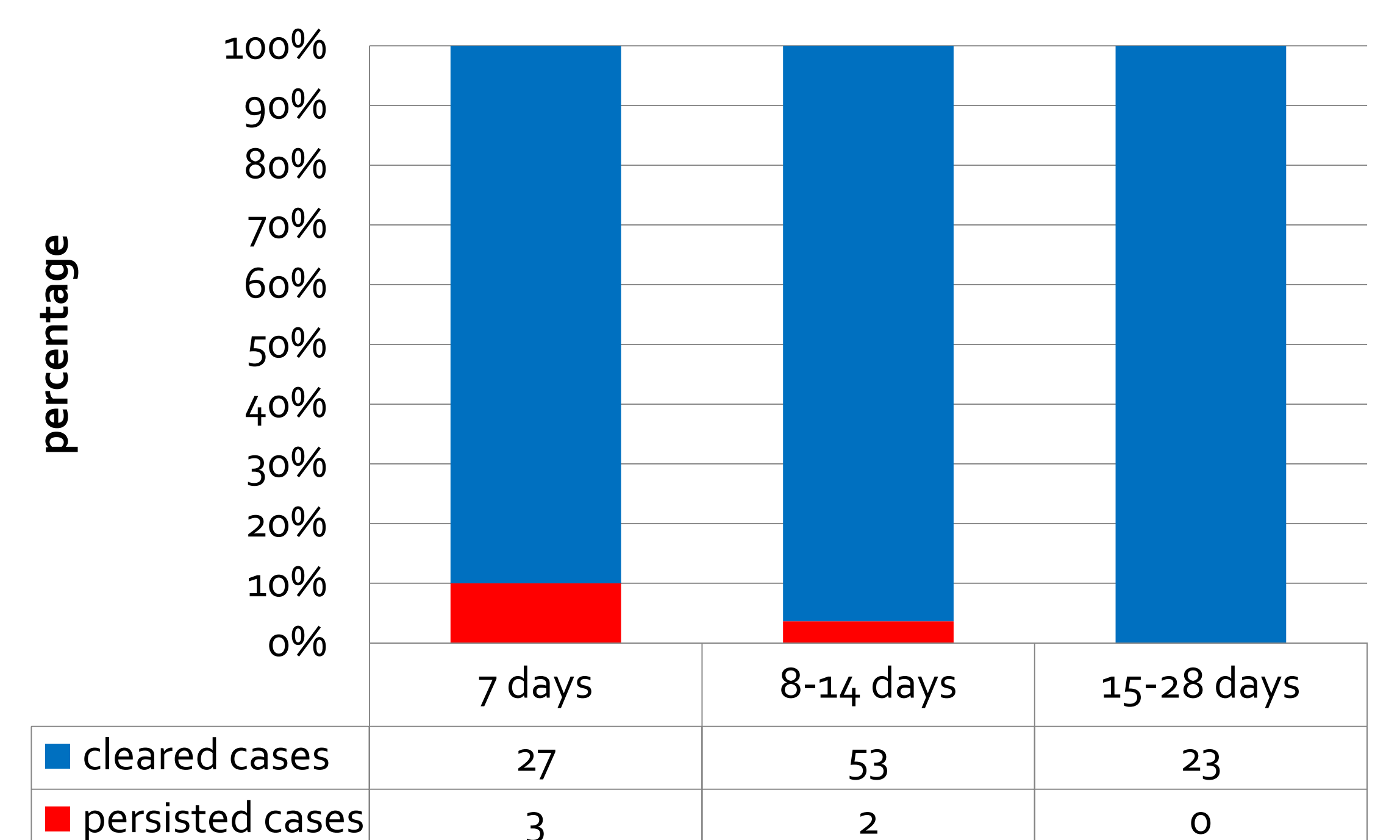


Figure 2. Proportion of persisting cases by duration from treatment to test of cure

Methods

A retrospective cohort study was conducted based on routine electronic medical records at the STI clinic of the Public Health Service (GGD) of Amsterdam. Eligible for inclusion were: adults diagnosed with pharyngeal gonorrhoea between January 2012 and July 2013, who were treated with ceftriaxone (500 mg IM), and who returned for a test of cure (TOC) between 7 and 28 days after treatment.

Definitive pharyngeal gonorrhoea was defined as positivity of *N. gonorrhoeae* RNA in pharyngeal swab tested using Nucleic Acid Amplification Test (NAAT) by Gen-Probe Aptima-Combo 2 Assay™ using Tigris DTS™ system.

Treatment delay was defined when antibiotics were administered after date of visit at which pharyngeal gonorrhoea was diagnosed.

Persisting pharyngeal gonorrhoea positivity was defined as subsequent positivity of *N. gonorrhoeae* in pharyngeal swab tested at the defined TOC time.

Discussion

Persisting pharyngeal gonorrhoea positivity after treatment could be the result of re-infection after treatment, of treatment failure, or could just reflect remnants of nucleic acid in a small number of patients. However, in this study, data on sexual re-exposure after treatment, that could contribute to re-infection, were not available.