Response to: 'Short duration antibiotic therapy for native joint arthritis cause by *Neisseria* infection?' by Ducours *et al*

We read with great interest the contribution of Ducours *et al*¹ to our article,² which randomised adult patients with native joint septic arthritis to either 2 or 4 weeks of systemic targeted antibiotic therapy after surgical drainage.² Ducours *et al* reveal a similar experience with a short duration of targeted systemic antibiotic therapy for adult native joint bacterial arthritis due to gonococci and meningococci.¹ There are substantial differences between our both studies: (1) Our arthritis episodes (majority hand arthritis) included all pyogenic bacteria, but not gonococci. In contrast, the Ducours group reports only *Neisseria* spp. (2) We randomised 154 cases, whereas Ducours *et al* resumed only 10 patients with mostly knee infections, although with a high proportion (30%) of bacteraemia. (3) Our minimal antibiotic treatment duration was 14 days (median 2 days of intravenous administration) compared with 7–10 days in the Ducours study (7 days of parenteral therapy).² (4) All our cases were surgically debrided, whereas most gonococcal cases were treated conservatively.

All these differences are explained by the nature of the pathogens: *Neisseria gonorrhoeae* or *N. meningitidis*. *Neisseria* spp classically require only a few days of targeted empirical therapy, when compared with other arthritis pathogens. This is a particularity of the pathogen, which is very (rapidly) susceptible to all appropriate antibiotic agents.³ Indeed, native joint septic arthritis is a very heterogeneous group of clinical entities⁴ with different epidemiological, microbiological and therapeutic aspects in humans.⁵ Already in 2005, clinicians recommended a maximum therapy duration of 1 week with targeted antibiotics for disseminated gonococcal infection, including for arthritis.⁶ The later US 2015 Sexually Transmitted Diseases guidelines reconfirmed this duration indicating the duration as 'for 7 days'.⁷ Hence, the good results by Ducours *et al* are not surprising.

Nevertheless, although investigating the most easily treatable bacterial pathogen in septic arthritis,⁴ Ducours *et al* underline the possibility of a short antibiotic treatment for septic arthritis,⁵ even in bacteraemic cases.¹ This is important, because long parenteral antibiotic therapies (eg, 4 weeks) are still being reported for neisserial infections.⁸ We therefore congratulate our colleagues for their study and encourage other researchers to perform prospective trials aiming at the optimisation of systemic antibiotic treatment for adult native joint septic arthritis.

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