

RESEARCH LETTER

Sexually transmitted *Shigella flexneri* and *Shigella sonnei* in men who have sex with men

Sexually transmitted enteric infections in men who have sex with men (MSM) can be caused by viruses (eg, hepatitis A), bacteria (eg, *Shigella*) and protozoa (eg, *Giardia*) and can cause hepatitis, proctocolitis and enteritis.¹ Enteric infections in MSM occur in sporadic outbreaks related to sexual networks involving transmission of other STIs, geosocial app use for meeting sexual partners and chemsex (high-risk sexual behaviour and recreational drug use, including injecting drug use).^{1,2} *Shigella* is a Gram-negative bacteria closely related to *Escherichia coli* causing a self-limiting diarrhoea illness caused by four subtypes (*S. dysenteriae*, *S. flexneri*, *S. boydii* and *S. sonnei*). Sexually transmitted *S. flexneri* in MSM has been shown to be associated with significant morbidity.³ *S. flexneri* and *S. sonnei* outbreaks in MSM have shown decreasing susceptibility and resistance to azithromycin and ciprofloxacin: antimicrobials should only be used in severe diarrhoea with sepsis.^{4,5} We aimed to describe cases of *S. flexneri* and *S. sonnei* in MSM between 2016 and 2019 in our open access sexual health clinic in Brighton, UK, which sees 4500 MSM attendances/year with high rates of HIV and STIs.³

There were 33 cases of shigellosis in MSM with a median age of 38 years (IQR 34–47); 11/33 (33%) reported recent chemsex use; the mean number of sexual partners in the previous 3 months was 6; 42% were HIV positive; and 7/19 (37%) HIV-negative MSM were using HIV pre-exposure prophylaxis. Fifteen (45%) were found to have *S. sonnei*, 5/33 (15%) have *S. flexneri* (two cases were type IIA, and in the remaining three, typing was unavailable), and 13/33 (39%) were DNA-PCR positive but culture negative and so were not identifiable. Fourteen (42%) were diagnosed with at least one STI (gonorrhoea, 21%; chlamydia, 12%; syphilis, 3%; hepatitis C, 3%; campylobacter, 3%; and giardia, 6%). MSM with *S. flexneri* were more likely to be HIV positive than those with *S. sonnei* ($p < 0.05$) (table 1). Antimicrobial sensitivities were available only in 11/15 cases of *S. sonnei* (fully sensitive, 9%; resistant to ciprofloxacin, 9%; resistant to azithromycin, 36%; and resistant to ciprofloxacin

Table 1 Cases of sexually transmitted *Shigella flexneri* and *Shigella sonnei* in men who have sex with men (N=33)

		Crude OR	95% CI	P value
HIV seropositive				
<i>S. flexneri</i>	5/5 (100%)	28.1	1.27 to 619	<0.05
<i>S. sonnei</i>	4/15 (27%)			
HIV negative on PREP				
<i>S. flexneri</i>	0/0	3.8	0.06 to 243	0.53
<i>S. sonnei</i>	2/11 (18%)			
Bacterial sexually transmitted infection				
<i>S. flexneri</i>	2/5 (40%)	0.8	0.1 to 6.0	0.8
<i>S. sonnei</i>	7/15 (47%)			
Chemsex				
<i>S. flexneri</i>	3/5 (60%)	1.7	0.2 to 13.4	0.61
<i>S. sonnei</i>	7/15 (47%)			

and azithromycin, 45%). Seven (21%) MSM were treated presumptively on the day of presentation with intramuscular ceftriaxone 2g for 1–3 days followed by oral ciprofloxacin. No MSM with ciprofloxacin resistance received ciprofloxacin; the remaining 26/33 (78%) did not receive antimicrobial treatment and their diarrhoea resolved.

In this small single-centre study of sexually transmitted shigellosis in MSM, we have shown that *S. flexneri* is more frequently seen in HIV-positive MSM, and similar to other data, shigellosis is associated with chemsex, and resistance to both azithromycin and ciprofloxacin is common in *S. sonnei*.^{1,2} Antimicrobial treatment is unnecessary in most cases of shigellosis and empirical treatment with ciprofloxacin and azithromycin should be avoided: locally, we use ceftriaxone 2g intramuscularly daily until antimicrobial sensitivity is known: ceftriaxone resistance has been reported at low levels in MSM.⁴ The increasing use of PCR culture-independent diagnostic tests makes it more difficult to identify cases and clusters within sexual networks in MSM of multidrug-resistant shigellosis: clinicians and microbiologists should be vigilant when managing MSM with diarrhoea to prevent large outbreaks of highly resistant shigellosis.

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