FACTORS ASSOCIATED WITH NEISSERIA GONORRHOEAE AZITHROMYCIN RESISTANCE IN THE QUEBEC SENTINEL NETWORK, 2015–2017

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Background N. gonorrhoeae azithromycin resistance (MIC ≥ 2 mg/L) increased from 1.7% to 30.9% between 2013 and 2017 in Quebec, Canada. The Quebec sentinel network aims to 1) maintain a sufficient number of cultures for antimicrobial resistance surveillance; 2) link antimicrobial susceptibility surveillance to epidemiological and clinical information; and 3) monitor treatment failures. We herein examine the associations between N. gonorrhoeae azithromycin resistance and epidemiological/clinical characteristics.

Methods Three regions participated: Montréal (two clinics recruiting mostly men having sex with men (MSM), Montérégie (22 clinics recruiting mostly heterosexuals) and Nunavik (participated only in 2016, recruited mainly heterosexual Inuit people). One strain per year, per individual was selected. When data was presented for 2015–2017 (2015 was incomplete), the most recent strain per individual was considered. Proportions were compared using chi-square tests.

Results Between September 2015 and December 2017, 68% of episodes (840/1240) had a culture performed and 571 (46%) of episodes (840/1240) had a culture performed and 571 (46%) of episodes were associated (e.g., cephalosporin resistance, allergy, or azithromycin resistance and other symptoms). Median TTP was 4 days (range 1–252) with participants reporting genital discharge (297/316 [94%]), dysuria (251/316 [79%]), genital discharge and dysuria (232/316 [73%]) and 76/316 (24%) additional concurrent symptoms (e.g., rectal bleeding, genital itching). TTP was longer than a week in 24% of participants. Age was inversely correlated with TTP (r = −0.276; P = 0.01) and TTP was longer in women compared to men (median 14 vs 3 days; P<0.001), and in those with other symptoms (median 7 vs 3 days; P<0.001). Sexual behaviours comprising same sex partner, higher number of partners, or casual/one-off relationships were associated (P=0.05) with shorter TTP. TTP was also shorter (P<0.05) in those with a history of previous gonorrhoea, but not previous chlamydia or history of HIV testing. TTP did not vary (P=0.05) by ethnicity, chlamydia co-infection, amount of discharge, or reported condom use.

Conclusion Specific demographic, behavioural and clinical factors were associated with TTP in individuals with symptomatic gonorrhoea. Detailed knowledge of these factors can be used to prioritise and optimise gonorrhoea management and prevention.

Disclosure No significant relationships.