# Research news in clinical context

Miguel Fernández-Huerta [1], Danielle Solomon [2], Rayner Kay Jin Tan [3]

## HIGH EFFICACY OF HIGH DOSE INTRAVENOUS CEFTRIAXONE AGAINST EXTRAGENITAL GONORRHOEA

Ceftriaxone monotherapy is well established for treating *Neisseria gonorrhoeae* (NG) urethritis, but data are limited for pharyngeal and rectal infections. This prospective single-centre study was conducted in Japan in 2017–2020 among HIV-negative men who have sex with men (MSM) who underwent routine STI screening, including nucleic acid amplification tests (NAATs) for rectal and pharyngeal NG every 3 months.[1] Among 320 cases of extragenital gonorrhoea (all asymptomatic), 208 received only ceftriaxone (single 1 g intravenous dose) and 112 received additional treatment with doxycycline (100 mg two times a day for 7 days) or azithromycin (single 1 g dose) for concomitant STIs (predominantly, *Chlamydia trachomatis* (CT)). There was no difference in NG cure rates between the two groups (98.1% vs 95.5%) or by infection site. Data are needed for other ceftriaxone dosing strategies and in areas where ceftriaxone resistance is a major concern.

## PUBLISHED IN STI—THE EDITOR'S CHOICE: *NEISSERIA GONORRHOEAE* IS ASSOCIATED WITH POOR PREGNANCY AND BIRTH OUTCOMES

This systematic review and meta-analysis compiled data from 30 studies that reported NG testing during pregnancy and compared pregnancy and birth outcomes between women with and without NG.[2] Results indicated that NG infections during pregnancy nearly doubled the risk of preterm birth (summary adjusted OR 1.90; 95% CI 1.14 to 3.19). The effect was more pronounced in low-income and middle-income countries than in high-income countries. Additionally, results suggested that NG infection may be associated with premature rupture of membranes, perinatal mortality, low birth weight and ophthalmia neonatorum, although estimates in most studies did not sufficiently control for confounders. The findings identify NG infections as risk factor for poor pregnancy outcomes.

## INADVERTENT HPV VACCINATION DURING OR PERIPREGNANCY IS NOT ASSOCIATED WITH ADVERSE OUTCOMES

Human papillomavirus (HPV) vaccination is not recommended in pregnancy due to lack of safety data. However, a pregnancy test is not required prior to vaccination. This multisite cohort study collated data from 445 women who received the nonavalent HPV vaccine during pregnancy and 496 that received the vaccine peripregnancy (within 42 days before last menstrual period (LMP)).[3] Pregnancy and neonatal outcomes in these groups were compared with those of 552 distal (16–22 weeks pre-LMP) exposures to the quadrivalent or nonavalent HPV vaccine. Compared with distal-exposures, during-pregnancy or peripregnancy, exposures were not associated with spontaneous abortion, preterm birth or small-for-gestational-age births. Birth defects were rare in all groups. The findings inform counselling for women who inadvertently receive the nonavalent (and possibly quadrivalent) HPV vaccine during pregnancy. Data are needed for the bivalent HPV vaccine.

## HAS THE TIME COME FOR POINT-OF-CARE STI TESTING?

Point-of-care (POC) STI testing has been proposed as a strategy to both improve treatment rates and optimise antibiotic stewardship. This study investigated the performance of the Visby Medical Sexual Health Test, a POC PCR-based NAAT for rapid (30 m) detection of CT, NG and *Trichomonas vaginalis* (TV).[4] The analysis used self-collected vaginal samples from 1535 women who attended 10 clinics in seven US states over an 11-month period. Results were compared with those of clinician-collected samples tested using gold-standard laboratory-based NAATs. Specificity and sensitivity of the POC test were 98.3% and 97.4% for CT, 97.4% and 99.4% for NG and 99.2% and 96.9% for TV. These results highlight the potential utility of easy-to-use POC NAATs in clinical practice.

## POINT OF CARE HIV-1 RNA TESTING FACILITATES THE SAME-DAY CONFIRMATION OF HIV INFECTION AND LEADS TO RAPID VIRAL SUPPRESSION WHEN FOLLOWED BY IMMEDIATE ANTIRETROVIRAL TREATMENT

MSM with primary HIV infection (PHI) and those with established but undiagnosed infection can be an important source of onward transmission. This study from Amsterdam evaluated a strategy comprising: (i) an online media campaign to increase awareness about PHI among MSM and promote self-referral for testing, (ii) qualitative POC HIV-1 RNA testing for same-day confirmation of infection and delivery of results and (iii) immediate referral of newly diagnosed men to a treatment centre to initiate antiretroviral therapy (ART within 24 hours.[5] Time to viral suppression was only 55 days for MSM who benefitted from the strategy and shorter than previous strategies that deferred ART initiation and/or did not employ HIV-1 RNA POC testing. The approach proved feasible in Amsterdam and should be investigated in other settings.

## PRE-EXPOSURE PROPHYLAXIS, HIV INCIDENCE AND RISK BEHAVIOUR AMONG MSM IN WEST AFRICA

This prospective cohort study investigated the use of pre-exposure prophylaxis (PrEP) among MSM in Côte D'Ivoire, Mali, Togo and Burkina Faso as an extension of CohMSM, a prevention study that did not include PrEP.[6] Participants were free to choose between daily or event-driven PrEP, change between the two and stop and restart PrEP. Among 598 MSM followed for 743.6 person years, HIV incidence was 2.3 per 100 person-years (95% CI 1.3 to 3.7) and lower than in CohMSM (adjusted incidence rate ratio 0.21; 95% CI 0.12 to 0.36). There was no evidence of an increase in risk behaviour since reports of condomless anal sex and prevalence of STIs remained stable, whereas the number of male sexual partners and of sex acts with casual male partners decreased. PrEP is an effective prevention tool for MSM in West Africa.

[1]Microbiology Department, Bellvitge University Hospital, University of Barcelona, Barcelona, Spain
[2]Institute for Global Health, University College London, London, UK
[3]Saw Swee Hock School of Public Health, National University of Singapore, Singapore

**Correspondence to** Miguel Fernández-Huerta, Microbiology, Bellvitge University Hospital, L'Hospitalet de Llobregat 08907, Spain; miguelferhuer@gmail.com

**Handling editor** Anna Maria Geretti

**Twitter** Danielle Solomon @df_solomon

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.



Sex Transm Infect: first published as 10.1136/sextrans-2020-054858 on 17 August 2021. Downloaded from http://sti.bmj.com/ on October 23, 2021 by guest. Protected by copyright.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Commissioned; internally peer reviewed.

© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.


**To cite** Fernández-Huerta M, Solomon D, Tan RKJ. *Sex Transm Infect* 2021;**97**:395–396.

*Sex Transm Infect* 2021;**97**:395–396.
doi:10.1136/sextrans-2020-054858

**ORCID iDs**
Miguel Fernández-Huerta http://orcid.org/0000-0002-1733-0925
Danielle Solomon http://orcid.org/0000-0003-4177-1832
Rayner Kay Jin Tan http://orcid.org/0000-0002-9188-3368

## REFERENCES

1 Aoki T, Mizushima D, Takano M, *et al*. Efficacy of 1G ceftriaxone monotherapy compared to dual therapy with azithromycin or doxycycline for treating extragenital gonorrhea among men who have sex with men. Clin Infect Dis 2021:ciab455.
2 Vallely LM, Egli-Gany D, Wand H, *et al*. Adverse pregnancy and neonatal outcomes associated with *Neisseria gonorrhoeae:* systematic review and meta-analysis. Sex Transm Infect 2021;97:104–11.
3 Kharbanda EO, Vazquez-Benitez G, DeSilva MB, *et al*. Association of inadvertent 9-valent human papillomavirus vaccine in pregnancy with spontaneous abortion and adverse birth outcomes. JAMA Netw Open 2021;4:e214340.
4 Morris SR, Bristow CC, Wierzbicki MR, *et al*. Performance of a single-use, rapid, point-of-care PCR device for the detection of *Neisseria gonorrhoeae, Chlamydia trachomatis,* and Tri*chomonas vaginalis: a* cross-sectional study. Lancet Infect Dis 2021;21:668–76.
5 Dijkstra M, van Rooijen MS, Hillebregt MM, *et al*. Decreased time to viral suppression after implementation of targeted testing and immediate initiation of treatment of acute human immunodeficiency virus infection among men who have sex with men in Amsterdam. Clin Infect Dis 2021;72:1952–60.
6 Laurent C, Dembélé Keita B, Yaya I, *et al*. HIV pre-exposure prophylaxis for men who have sex with men in West Africa: a multicountry demonstration study. Lancet HIV 2021;8:e420–8.

Sex Transm Infect: first published as 10.1136/sextrans-2020-054858 on 17 August 2021. Downloaded from http://sti.bmj.com/ on October 23, 2021 by guest. Protected by copyright.