

Research news in clinical context

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FALSE-NEGATIVE CHLAMYDIA TRACHOMATIS TESTS UNCOVERED IN FINLAND

Nucleic acid amplification tests are essential for the diagnosis of STIs. A report from Finland recently alerted the STI community about the risk of false-negative *Chlamydia trachomatis* test results with the Aptima Combo 2 assay. A single-nucleotide mutation in the 23S rRNA gene was likely responsible for the discrepancies. The study provides a warning to laboratories and suggests the need to determine the spread of the mutant clone.¹ More broadly, the findings encourage laboratories to keep their molecular methods under regular evaluation and ensure that diagnostic quality is maintained in the face of the natural genetic evolution of bacteria. *Euro Surveill* May 2019: <https://doi.org/10.2807/1560-7917.ES.2019.24.22.1900298>

RAPID HEPATITIS C VIRUS ANTIBODY TESTS DELAY THE DIAGNOSIS OF RECENT INFECTION

Routine screening for hepatitis C virus (HCV) infection is recommended for men who have sex with men (MSM) receiving HIV pre-exposure prophylaxis (PrEP).² In the ANRS IPERGAY PrEP trial, among 429 MSM, HCV incidence was 1.4/100 person-years and was associated with condomless sex, sexualised drug use, fisting and group sex. HCV antigen (HCV Ag) immunoassays and plasma HCV RNA tests were positive within a median of 2 months before HCV antibody (anti-HCV) detection and alanine aminotransferase elevation. When compared with the laboratory-based third-generation ARCHITECT anti-HCV test, rapid anti-HCV tests showed reduced sensitivity (OraQuick 93%, Toyo 79%). HCV Ag immunoassay or plasma HCV RNA tests are recommended for the early diagnosis

of a recently acquired HCV infection in those at risk, including MSM on PrEP. *AIDS* September 2019: <https://doi.org/10.1097/QAD.0000000000002364>

HIV OUTBREAK IN LUXEMBOURG ASSOCIATED WITH INJECTING COCAINE

In 2016, Luxembourg observed an increase in new HIV diagnoses among people who inject drugs, despite high rates of treatment coverage (88%) and virological suppression (92%) in the HIV-diagnosed population. Compared with people who only injected heroin, those who injected both cocaine and heroin were younger, reported more frequent piercing, shared and injected drugs more often and were more frequently HIV positive. Almost all newly HIV-diagnosed individuals reported injecting and sharing cocaine and heroin and having a history of hepatitis C virus. Compared with previous years, women accounted for a significantly higher proportion of new HIV diagnoses. Emerging drug trends warrant monitoring in the context of HIV transmission. *PLoS ONE* May 2019: <https://doi.org/10.1371/journal.pone.0215570>

POPULATION-LEVEL BENEFITS OF HUMAN PAPILLOMAVIRUS VACCINATION

Almost 100 countries have introduced human papillomavirus (HPV) vaccination programmes. A systematic review and meta-analysis comparing prevaccination and postvaccination periods from girl-only HPV vaccination programmes provides compelling evidence of the direct and herd impact of vaccination. Among girls aged 13–19 years and women aged 20–24 years, prevalence of high-risk HPV-16 and HPV-18 decreased by 83% and 66%, respectively. Cervical intraepithelial neoplasia grade 2+ declined by 51% and 31% in the same two age groups. Diagnoses of anogenital warts declined among both girls and boys aged 15–19 years (67% and 48%) and women and men aged 20–24 years (31% and 32%). The greatest benefit was seen in countries with multiple-age vaccination and high vaccination coverage. Increasingly, countries are adopting gender-neutral HPV vaccination that

will provide further data on population impact. *Lancet* August 2019: [https://doi.org/10.1016/S0140-6736\(19\)30298-3](https://doi.org/10.1016/S0140-6736(19)30298-3)

UNDETECTABLE EQUALS UNTRANSMITTABLE AMONG HIV SERODIFFERENT GAY COUPLES

Antiretroviral treatment (ART) prevents HIV transmission among serodifferent heterosexual couples.^{3,4} The PARTNER study followed 782 serodifferent gay couples that reported condomless sex where the HIV-positive partner was on suppressive ART and the HIV-negative partner did not use prophylaxis. Over 1593 couple-years of follow-up, the HIV transmission rate was zero (upper 95% CI 0.23/100 couple-years). This scientific evidence underpins the undetectable equals untransmittable message and illustrates the benefits of diagnosing and treating HIV early to prevent transmission. The study did observe new HIV infections from non-partnership sources and incident STIs, emphasising the need to optimise sexual health messaging for people with HIV and their partners. As PARTNER analysed people well established on ART, caution is required when counselling serodifferent partners about transmission risk early after ART initiation. *Lancet* May 2019: [https://doi.org/10.1016/S0140-6736\(19\)30418-0](https://doi.org/10.1016/S0140-6736(19)30418-0)

SOLITHROMYCIN DISAPPOINTS IN THE TREATMENT OF UNCOMPLICATED GENITAL GONORRHOEA

Antimicrobial resistance to *Neisseria gonorrhoeae* is increasing worldwide.⁵ It was hoped that solithromycin might prove to be a promising fourth-generation macrolide for the treatment of gonorrhoea. Disappointingly, a randomised, phase 3, multicentre trial showed that a single dose of solithromycin 1000 mg was inferior to dual therapy with ceftriaxone 500 mg plus azithromycin 1000 mg in the treatment of uncomplicated genital gonorrhoea. Insufficient duration of solithromycin exposure might have accounted for the treatment failures. As the proportion of patients with gastrointestinal adverse events was higher in the solithromycin group, future studies of multiple-dose solithromycin must consider the potential risks of drug-related adverse effects. Meanwhile, although single-dose solithromycin cannot replace dual treatment for gonorrhoea, it might be considered in cases of resistance. *Lancet Infect Dis* June 2019: [https://doi.org/10.1016/S1473-3099\(19\)30116-1](https://doi.org/10.1016/S1473-3099(19)30116-1)

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