STI perspectives

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HIGH BURDEN OF ANTIBIOTIC-RESISTANT *MYCOPLASMA GENITALIUM* IN SYMPTOMATIC URETHRITIS

Mycoplasma genitalium is an aetiological agent of sexually transmitted urethritis. A cohort study investigated *M. genitalium* prevalence, antibiotic resistance and association with previous macrolide exposure among 1816 Chinese men who presented with symptomatic urethritis between 2011 and 2015. Infection was diagnosed by PCR, and sequencing was used to detect mutations that confer resistance to macrolides and fluoroquinolones. In 11% of men, *M. genitalium* was the sole pathogen identified. Nearly 90% of infections were resistant to macrolides and fluoroquinolones; previous macrolide exposure was associated with higher prevalence of resistance (97%). The findings point to the need for routine screening for *M. genitalium* in symptomatic men with urethritis. Treatment strategies to overcome antibiotic resistance in *M. genitalium* are needed.

Yang L, Xiaohong S, Wenjing L, *et al*. *Mycoplasma genitalium* in symptomatic male urethritis: macrolide use is associated with increased resistance. *Clin Infect Dis* 2020;5:805–10. doi:10.1093/cid/ciz294.

A NEW ENTRY INHIBITOR OFFERS PROMISE FOR TREATMENT-EXPERIENCED PATIENTS WITH MULTIDRUG-RESISTANT HIV

Fostemsavir, the prodrug of temsavir, is an attachment inhibitor: by targeting the gp120 protein on the HIV-1 envelope, it prevents viral interaction with the CD4 receptor. No cross-resistance has been described with other antiretroviral agents, including those that target viral entry by other modalities. In the phase III BRIGHTE trial, 371 highly treatment-experienced patients who had exhausted ≥4 classes of antiretrovirals received fostemsavir with an optimised regimen. After 48 weeks, 54% of those with 1–2 additional active drugs achieved viral load suppression <40 copies/mL; response rates were 38% among patients lacking other active agents. Drug-related adverse events included nausea (4%) and diarrhoea (3%). As gp120 substitutions reduced fostemsavir susceptibility in up to 70% of patients with virological failure, fostemsavir offers the most valuable salvage option in partnership with other active drugs.

Kozal M, Aberg J, Pialoux G, *et al*. Fostemsavir in adults with multidrug-resistant HIV-1 infection. *N Engl J Med* 2020;382:1232–43. doi: 10.1056/NEJMoa1902493

NOVEL TOOLS TO AID IDENTIFICATION OF HEPATITIS C IN PRIMARY CARE

Hepatitis C can now be cured with oral antiviral treatment, and improving diagnosis is a key element of elimination strategies.[1] A cluster randomised controlled trial in South West England tested performance and cost-effectiveness of an electronic algorithm that identified at-risk patients in primary care according to national recommendations,[2] coupled with educational activities and interventions to increase patients' awareness. Outcomes were testing uptake, diagnosis and referral to specialist care. Practices in the intervention arm had an increase in all outcome measures, with adjusted risk ratios of 1.59 (1.21–2.08) for uptake, 2.24 (1.47–3.42) for diagnosis and 5.78 (1.60–21.6) for referral. The intervention was highly cost-effective. Electronic algorithms applied to practice systems could enhance testing and diagnosis of hepatitis C in primary care, contributing to global elimination goals.

Roberts K, Macleod J, Metcalfe C, *et al*. Cost-effectiveness of an intervention to increase uptake of hepatitis C virus testing and treatment (HepCATT): cluster randomised controlled trial in primary care. *BMJ* 2020;368:m322. doi:10.1136/bmj.m322

LOW COMPLETION RATES FOR ANTIRETROVIRAL POSTEXPOSURE PROPHYLAXIS (PEP) AFTER SEXUAL ASSAULT

A 4-week course of triple-agent postexposure prophylaxis (PEP) is recommended following a high-risk sexual assault.[3 4] A retrospective study in Barcelona identified 1695 victims attending an emergency room (ER) between 2006 and 2015. Overall, 883 (52%) started prophylaxis in ER, which was mostly (43%) lopinavir/ritonavir based. Follow-up appointments were arranged for those living in Catalonia (631, 71.5%), and of these, only 183 (29%) completed treatment. Loss to follow-up was more prevalent in those residing outside Barcelona. PEP non-completion was associated with a low perceived risk, previous assaults, a known aggressor and a positive cocaine test. Side effects were common, occurring in up to 65% of those taking lopinavir/ritonavir and accounting for 15% of all discontinuations. More tolerable PEP regimens, accessible follow-up and provision of 1-month supply may improve completion rates.

Inciarte A, Leal L, Masfarre L, *et al*. Postexposure prophylaxis for HIV infection in sexual assault victims. *HIV Med* 2020;21:43–52. doi:10.1111/hiv.12797.

EFFECTIVE ANTIRETROVIRAL THERAPY REDUCES ANAL HIGH-RISK HPV INFECTION AND CANCER RISK

Among people with HIV, effective antiretroviral therapy (ART) is expected to improve control of anal infection with high-risk human papillomavirus (HR-HPV) and reduce the progression of HPV-associated anal lesions. The magnitude of the effect is not well established. By meta-analysis, people on established ART (vs ART-naive) had a 35% lower prevalence of HR-HPV infection, and those with undetectable viral load (vs detectable viral load) had a 27% and 16% reduced risk of low and high-grade anal lesions, respectively. Sustained virological suppression on ART reduced by 44% the risk of anal cancer. The role of effective ART in reducing anal HR-HPV infection and cancer risks is especially salient given current limitations in anal cancer screening, high rates of anal lesion recurrence and access to vaccination.

Kelly H, Chikandiwa A, Alemany Vilches L, *et al*. Association of antiretroviral therapy with anal high-risk human papillomavirus, anal intraepithelial neoplasia and anal cancer in people living with HIV: a systematic review and meta-analysis. *Lancet HIV*. 2020;7:e262–78. doi:10.1016/S2352-3018(19)30434-5.

THE IMPACT OF SEX WORK LAWS AND STIGMA ON HIV PREVENTION AMONG FEMALE SEX WORKERS

Sex work laws and stigma have been established as structural risk factors for HIV acquisition among female sex workers (FSWs); however, individual-level data

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assessing these relationships are limited. A study examined individual-level data collected in 2011–2018 from 7259 FSWs across 10 sub-Saharan African countries. An association emerged between HIV prevalence and increasingly punitive and non-protective laws: HIV prevalence among FSWs was 11.6%, 19.6% and 39.4% in contexts where sex work was partly legalised, not recognised or criminalised, respectively. Stigma measures such as fear of seeking health services, mistreatment in healthcare settings, lack of police protection, blackmail and violence were associated with higher HIV prevalence and more punitive settings. Sex work laws that protect sex workers and reduce structural risks are needed.

Lyons CE, Schwartz SR, Murray SM, *et al*. The role of sex work laws and stigmas in increasing HIV risks among sex workers. *Nat Commun* 2020;11:773. doi:10.1038/s41467-020-14593-6.

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