Research news in clinical context

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THE HIGH HEALTHCARE BURDEN OF HEPATITIS DELTA

Hepatitis delta virus (HDV) co-infection is known to accelerate disease progression in people with chronic hepatitis B. This case-control study used real-world insurance claims data from 2011 to 2014 to characterise the healthcare cost of HDV in USA. Nearly 3000 cases with HDV and Hepatitis B Virus (HBV) were matched by sociodemographic characteristics and comorbidities to HBV-only controls. Cases had higher rates of cirrhosis and hepatic decompensation and significantly more healthcare claims and annual healthcare costs. People with HDV also had higher prevalence of substance abuse and higher rates of hepatitis C and STIs. Excess disease burden warrants improved control strategies targeting vulnerable populations at risk of dual HBV and HDV infection. Elsaid MI, Li Y, John T, *et al* Economic and healthcare burdens of hepatitis delta: a study of commercially insured adults in the United States. *Hepatology* 2019; doi:10.1002/hep.31055.

HSV-2 INCREASES THE RISK OF HIV INFECTION: WHAT ARE THE CONTROL OPTIONS?

This systematic review estimated the population attributable fraction of herpes simplex virus type 2 (HSV-2) seropositivity to HIV acquisition. Globally, of the 1.4 million sexually-acquired HIV infections that occurred in individuals aged 15–49 years in 2016, nearly a third (30%) were attributable to HSV-2. The effect of HSV-2 was prominent in the African region (37%), women (35%) and individuals aged 25–49 years (32%). While persistent genital mucosal inflammation is thought to enhance virus transmission, trials of suppressive therapy for HSV-2 with oral acyclovir have not been effective in reducing HIV acquisition.[1] Future studies must assess novel interventions against HSV-2, potentially including preventive and therapeutic vaccines. Meanwhile, there may be a role for targeted HIV pre-exposure prophylaxis in populations with high rates of HSV-2 and HIV infection.

Looker KJ, Welton NJ, Sabin KM, *et al* Global and regional estimates of the contribution of HSV-2 infection to HIV incidence: a population attributable fraction analysis using published epidemiological data. *Lancet Infect Dis* 2019; doi:10.1016/S1473-3099:30470.

STI SCREENING BELOW PAR IN MSM PREP USERS

In USA, bi-annual screening for syphilis and all sites gonorrhoea/chlamydia is recommended for men who have sex with men (MSM) receiving HIV pre-exposure prophylaxis (PrEP).[2] A retrospective study among 290 MSM in Baltimore City found that only 43% received full screening at PrEP initiation, with syphilis tested most frequently (79%) whereas only 56%–69% were tested for urogenital, rectal and oropharyngeal gonorrhoea/chlamydia. A reported history of oral and anal sex doubled the likelihood of an initial test, suggesting the offer of screening was history-driven rather than guideline-driven. During follow-up, proportions undergoing screening declined to 28% at 6 months and was 42% at 12 months, whereas rates of STI positivity increased. STI screening guidelines need wider implementation in PrEP users in USA. More data are needed globally, including from low–middle income countries.

Schumacher C, Wu L, Chandran A, *et al* STI Screening among Gay, Bisexual and Other Men who Have Sex with Men Prescribed PrEP in Baltimore City, Maryland. *Clin Infect Dis* 2019; doi: 10.1093/cid/ciz1145.

CHLAMYDIA TRACHOMATIS DNA CAN BE FOUND IN SALIVA, BUT DOES SALIVA PLAY A ROLE IN TRANSMISSION?

Investigators in Melbourne studied 42 men who had tested positive for oropharyngeal *Chlamydia trachomatis* (CT) to determine whether bacterial DNA can be detected in saliva and specific anatomical sites in the oropharynx. Most participants (32, 76%) had CT DNA in swabs taken from both the tonsillar fossae and the posterior oropharynx, whereas 29 (69%) had CT DNA in saliva. The highest bacterial load was recovered from the posterior oropharynx and the lowest from saliva. The data clearly demonstrate the presence of CT DNA in saliva of people with a diagnosis of oropharyngeal CT. The role of saliva in transmission remains at present unknown, however, and further data are needed to confirm whether infection could be transmitted by kissing or rimming.

Phillips TR, Fairley CK, Maddaford K, *et al* Bacterial load of Chlamydia trachomatis in the posterior oropharynx, tonsillar fossae and saliva among gay and bisexual men with untreated oropharyngeal chlamydia. *J Clin Microbiol* 2019; doi: 10.1128/JCM.01375-19.

THE PUBLIC HEALTH CHALLENGE OF RESISTANT *CAMPYLOBACTER* SPP. SPREADING AMONG MSM

MSM are at risk of infection with enteric pathogens and exposure to antibiotics for STIs may promote the emergence of antimicrobial resistance (AMR). This retrospective study characterised the antimicrobial resistance profiles and epidemiological relatedness of drug-resistant isolates of *Campylobacter* spp. collected from MSM in Montreal and Seattle in 2015–2018. Bacterial genome sequencing was highly accurate in predicting AMR: for example, mutations in the *gyrA, tetO* and *23S rRNA* genes were linked to fluoroquinolone, tetracycline and macrolide resistance, respectively. One macrolide-resistant *C. coli* strain had a novel *erm* gene, representing the first detection of an AMR gene within a Clustered Regularly Interspaced Short Palindromic Repeat (CRISPR) array in a clinical isolate. Two Montreal–Seattle transmission clusters were identified, warning that multidrug-resistant *Campylobacter* spp. are spreading among MSM across international boundaries.

Greninger AL, Addetia A, Starr K, Cybulski RJ, *et al* International Spread of Multidrug-Resistant Campylobacter coli in Men who have Sex with Men in Washington State and Quebec, 2015-2018. *Clin Infect Dis* 2019 ; doi: 10.1093/cid/ciz1060.

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ACQUISITION AND CLEARANCE OF ONCOGENIC HUMAN PAPILLOMA VIRUS TYPES IN HIV-POSITIVE MSM

Persistent infection of the anal mucosa with high-risk oncogenic human papilloma virus (HPV) types (HR-HPV) increases the risk of squamous cell carcinoma. This longitudinal study reported on 405 MSM (mean age 36 years), most of whom (87%) were receiving antiretroviral therapy. The mean current and nadir CD4 counts were 690 and 368 cells/mm^3, respectively. At baseline, 77% had at least one HR-HPV (most commonly HPV-16). Clearance was seen in 35% of 301 cases within 49 months, however new acquisitions of any HPV type exceeded this at 43% within 36 months. At the end of follow-up, 60% had HR-HPV, and persistent infection was associated with the number of sexual partners. The high rate of incident HPV infection points to potential benefits of HPV vaccination in HIV-positive MSM across all ages.

Hidalgo-Tenorio C, Gil-Anguita C, López Ruz MA, *et al*. ART is key to clearing oncogenic HPV genotypes (HR-HPV) in anal mucosa of HIV-positive MSM. *PLoS One* 2019; doi:10.1371/journal.pone.0224183.

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Correction: *Research news in clinical context*

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The article title has been corrected in the published version. The correct title is below:

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