Research news in clinical context

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SITAFLOXACIN FOR RECTAL AND UROGENITAL INFECTIONS WITH QUINOLONE-RESISTANT *MYCOPLASMA GENITALIUM*

Sitafloxacin is a fourth-generation fluoroquinolone approved in Japan. An open-label prospective study evaluated sitafloxacin monotherapy (200 mg daily for 7 days) for treating rectal and urogenital infections in 180 men who have sex with men (MSM, 72 living with HIV), including 97 of 126 (77%) and 27 of 120 (23%) carrying strains with mutations in parC and gyrA, respectively. Microbiological cure rates were 158 of 180 (88%) overall and did not differ by infection site (p=0.359) or HIV status (p=0.515). By resistance profile, cure rates were 25 of 25 (100%) with wild-type parC and gyrA, 52 of 56 (93%) with parC G248T(S83I) and wild-type gyrA, and 10 of 24 (42%) with parC G248T(S83I) plus gyrA mutations. Treatment was generally well tolerated and did not select for quinolone resistance-associated mutations. Sitafloxacin may provide a first-line option in settings with a high prevalence of parC mutations and a low prevalence of gyrA mutations.

Ando N, Mizushima D, Takano M, *et al*. Effectiveness of sitafloxacin monotherapy for quinolone-resistant rectal and urogenital Mycoplasma genitalium infections: a prospective cohort study. *Journal of Antimicrobial Chemotherapy*, 788, pp.2070–2079.

PUBLISHED IN *STI*: UNMET SEXUALLY TRANSMITTED INFECTION/HIV TESTING NEEDS AMONG UK RESIDENT MSM DURING THE COVID-19 PANDEMIC

Cisgender men ≥16 years accessing social media and dating applications and reporting sex with men in the last year were offered three anonymous online surveys at different stages of the pandemic (P1=June–July 2020, P2=November–December 2020, P3=March–April 2021). Among 4900 participants (89% white, 85% residents in England, 10% living with HIV), proportions reporting ≥1 new sex partner increased between P1 (37%) and P2 (62%) and dropped slightly in P3 (52%); other risk behaviours and use of HIV pre-exposure prophylaxis showed similar trends. Overall, 26% and 32% of participants reported unmet sexually transmitted infection testing needs in P1 and P2 (P3 not available); 23%, 31% and 25% reported unmet HIV testing needs in P1, P2 and P3, respectively. Unmet testing needs were disproportionately high among groups who already experience poor sexual health, including bisexual-identifying MSM, non-white ethnicities and those with low life satisfaction.

Brown JR, Reid D, Howarth AR, *et al*. Changes in STI and HIV testing and testing need among men who have sex with men during the UK's COVID-19 pandemic response. *Sex Transm Infect*. 2022;99(4):226–238.

CONTINUING IMPROVEMENTS IN LIFE EXPECTANCY AMONG PEOPLE LIVING WITH HIV IN EUROPE AND NORTH AMERICA

This multicohort analysis encompassed 206 891 people who started antiretroviral therapy (ART) when aged ≥16 years analysed life expectancy based on the year of ART initiation (pre-2015 vs 2015–2019). At 40 years, life expectancy was 36 vs 39 years among women (compared with 46 years in the general population) and 35 vs 37 among men (compared with 41 years in the general population). Among those with baseline CD4+ counts <49 cells/µL, the respective figures were 19 vs 25 years among women and 18 vs 24 years among men. Conversely, if starting ART with CD4 counts >500 cells/µL, the respective figures were 40 vs 42 years among women and 38 vs 39 years among men. The findings underscore the crucial importance of diagnosing and treating HIV early to maximise the lifespan of people living with HIV (PLWH).

Trickey A, Sabin CA, Burkholder G, *et al*. Life expectancy after 2015 of adults with HIV on long-term antiretroviral therapy in Europe and North America: a collaborative analysis of cohort studies. *Lancet HIV* 2023;10:e295–307.

SECOND-LINE DOLUTEGRAVIR-BASED ART PROVES EFFECTIVE IN KENYA

A multicentre, open-label trial in Kenya recruited adults who were receiving virologically suppressive second-line ART with a ritonavir-boosted protease inhibitor (PI/r, atazanavir or less commonly lopinavir) plus two nucleoside reverse transcriptase inhibitors (TDF/3TC, ZDV/3TC or less commonly ABC/3TC). Participants had experienced failure of first-line non-nucleoside reverse transcriptase inhibitor-based ART, but resistance data were unavailable. They were randomly assigned (1:1) to continue their regimen or switch the PI/r to dolutegravir. Among 791 participants, proportions with HIV-1 RNA ≥50 copies/mL at week 48 were 5.1% vs 5.0% in the two groups (intention-to-treat, Food and Drug Administration snapshot analysis), indicating non-inferiority. Treatment-related grade 3/4 adverse events occurred in 6.9% and 5.7%, respectively. In the dolutegravir group, most (19 of 20) participants with virological failure had a viral load <200 copies/mL; no sample was amplified for resistance testing. Dolutegravir offers an effective alternative to PI/r-based second-line ART.

Ombajo LA, Penner J, Nkuranga J, *et al*. Second-Line Switch to Dolutegravir for Treatment of HIV Infection. *New England Journal of Medicine* 2023;388:2349–59.

LOW-DOSE AMOXICILLIN VERSUS HIGH-DOSE AMOXICILLIN PLUS PROBENECID FOR THE TREATMENT OF SYPHILIS IN PLWH

To safeguard against intramuscular benzathine penicillin G shortages, alternative treatment options for syphilis need investigating. Following a diagnosis of either early (n=98) or late (n=14) syphilis, this open-label, non-inferiority trial randomised 112 adults living with HIV (91% on ART, median CD4 count 525 cells/µL) to either low-dose amoxicillin (1500 mg/day) or high-dose amoxicillin (3000 mg/day) plus probenecid. Based on the rapid plasma reagin, the 12-month serological cure rates with low-dose and high-dose amoxicillin were 91% and 94% overall and 94% and 98% in early syphilis, respectively. Cure rates were lower for both arms in late syphilis (71%). Side effects were mild and similar between the two arms, with marginally

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more diarrhoea in the high-dose group. Although differences in serological cure rates between regimens were small, low-dose amoxicillin did not demonstrate non-inferiority. Further studies with larger sample sizes are needed.

Ando N, Mizushima D, Omata K, *et al*. Combination of Amoxicillin 3000 mg and Probenecid vs 1500 mg Amoxicillin Monotherapy for Treating Syphilis in Patients with HIV: an Open-Label, Randomized, Controlled, Non-Inferiority Trial. *Clin Infect Dis*. 2023 May 9:ciad278.

EARLY ART INITIATION IN CRYPTOCOCCAL MENINGITIS

Using observational data from Europe and North America and modelling to mimic a randomised clinical trial, researchers compared all-cause mortality with either early (≤14 days) or late (15–56 days) ART initiation following a diagnosis of cryptococcal meningitis. Overall, 33 of 190 (17%) individuals died within 6 months of the diagnosis. Modelled mortality rates were 11% vs 7% with late versus early ART, respectively, yielding an adjusted HR of 1.40 (0.66–2.95). Factors that may explain the difference include greater access to healthcare, treatment with amphotericin B and flucytosine, and lumbar puncture to reduce intracranial hypertension. Overall, the study showed little evidence of a detrimental effect of early ART initiation among people diagnosed with cryptococcal meningitis. Further studies are needed to inform guidelines.

Ingle SM, Miro JM, May MT, *et al*. Early antiretroviral therapy not associated with higher cryptococcal meningitis mortality in people with HIV in high-income countries: an international collaborative cohort study. *Clinical infectious diseases*. 2023 Mar 8.

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