P5.15 PREPARING FOR PREP: ESTIMATING THE NEED FOR HIV PRE-EXPOSURE PROPHYLAXIS AMONG MEN WHO HAVE SEX WITH MEN USING SEXUAL HEALTH SURVEILLANCE DATA IN ENGLAND

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10.1136/sextrans-2017-053264.631

Introduction To inform public health planning for a large-scale PrEP trial in England, we estimated the need for HIV pre-exposure prophylaxis (PrEP) among men who have sex with men (MSM) attending sexual health clinics.
Methods National STI surveillance data from the genitourinary medicine clinic activity dataset (GUMCADv2) were used to estimate the annual number of HIV-negative MSM who had a HIV test in the past year (which will be a criterion for accessing PrEP in England), for 2010–2015. To estimate the number and proportion of all MSM needing PrEP, we used bacterial STI diagnosis in the past year as a proxy for high-risk behaviour, and estimated HIV incidence (per 100 person-years) in both groups. We used these data to understand the likely geographical distribution of MSM who might need PrEP within the 152 English counties.
Results The number of HIV-negative MSM attending sexual health clinics increased by 68% from 69 392 in 2010 to 1 16 546 in 2015, and the number of HIV-negative MSM with a prior HIV test nearly doubled from 14 643 to 29 023 in the same period. Among HIV-negative MSM with a prior HIV test, the number with a recorded bacterial STI (past year) increased from 4365 (30%) in 2010 to 10,276 (35%) in 2015 (33% on average). HIV incidence among MSM with a prior HIV test was 1.9 (95% CI 1.6–2.2) per 100py compared to 3.3 (2.7–4.0) per 100py in MSM with a prior HIV test and history of bacterial STI. The number of MSM in need of PrEP (according to bacterial STI history) was 200 men in 4% (6/152) of counties.
Conclusion We estimated that the need for PrEP among MSM in England in 2015 might be around 10 000 individuals with an annual HIV incidence of 3%. Need for PrEP was highly concentrated; in most English counties, the number of MSM with a prior HIV test was small, and only 33% of these men might be clinically assessed as eligible for PrEP. These data illustrate how the population need for PrEP might be estimated in advance of a national trial, and will inform future evaluations at a population level.

P5.16 COMBINATION OF INHIBITORS OF CHAPERONE ACTIVITY AND CHAPERONE EXPRESSION FOR PREVENTION OF HIV-1 REACTIVATION FROM LATENCY

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10.1136/sextrans-2017-053264.632

Introduction *In vivo*, the state of latency allows HIV-1 to persist in cellular reservoirs and avoid eradication. Intracellular heat shock protein 90 (Hsp90) was shown to contribute to HIV-1 reactivation from latency, so that cell-permeable inhibitors of the Hsp90 chaperone activity can prevent this reactivation and be considered as potential anti-AIDS agents. However, the Hsp90 activity inhibitors provoke up-regulation of inducible Hsp90, Hsp70, Hsp27 and we suggested that such accumulation of chaperones in cellular reservoirs assists the virus and impairs the beneficial effects of Hsp90-inhibiting treatment. Here we examined whether the suppressive action of Hsp90 inhibitors on the HIV-1 reactivation is enhanced by targeting the Hsp induction and/or the chaperone function of Hsp70.
Methods The HIV-1 reactivation was studied in cultured J-Lat cells. 17AAG and AUY922 were used as the Hsp90 activity inhibitors. The Hsp accumulation in the Hsp90 inhibitor-treated cells was blocked by co-treatments with quercetin or KNK437. The Hsp70 chaperone function was inhibited by 2-phenylethynesulfonamide (PES).
Results Inhibition of the Hsp90 chaperone activity with 17AAG or AUY922 does suppress the HIV-1 reactivation in the drug-treated cells but this is also accompanied by the up-regulation of Hsp90, Hsp70 and Hsp27. In the case of inhibitory co-treatments (17AAG or AUY922 + quercetin or KNK437 + PES), no increase in the cellular Hsp levels occurred despite of the dysfunction of Hsp90-,Hsp70-dependent chaperone machine. Such a combination of the inhibitors simultaneously targeting the chaperone activities of Hsp90 and Hsp70 and the Hsp induction much stronger suppressed the chaperone-dependent HIV-1 reactivation, as compared with the action of Hsp90 inhibitors alone.
Conclusion Intracellular Hsp70 appears to contribute to the HIV-1 reactivation from latency. The suppressive effects of Hsp90-inhibiting drugs on the HIV-1 reactivation from latency can be enhanced by parallel inhibiting both the Hsp induction and the Hsp70 chaperone activity.

P5.17 ATTITUDES OF CHURCH LEADERS ON HIV PREVENTION AMONG THE PRESBYTERIAN CHURCH LEADERS OF AIZAWL, MIZORAM, INDIA

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10.1136/sextrans-2017-053264.633

Introduction Knowledge about Church leader's attitudes towards HIV prevention is essential to understand the factors that enable them to take on leadership role in facilitating HIV prevention efforts. Church leaders can have a significant contribution in a Christian dominated state like Mizoram. The study aims to explore attitudes of church leaders on HIV prevention among the Presbyterian Church leaders in Aizawl City, Mizoram.
Methods A Cross sectional study using in-depth interviews and focus group discussions were used. From 15 Presbyterian churches randomly selected all over Aizawl city, 293 Church leaders representing the four groups of leadership (Pastor/Elder, Women, Youth and Men) completed a self administered questionnaire along with 12 in-depth interviews and 3 focus group discussions. Bivariate analysis was done to identify associated factors.
Results The proportion of Church leaders willing to advocate condom use for HIV prevention was 34.0 percent. Around 97.3 percent agreed that Church leaders should be concerned and intervene in HIV prevention. Nearly 90.4 percent felt it should be discussed in Church services. About 70 percent of the Church leaders, Biblical disobedience leads to HIV infection and almost 80 percent felt homosexuals deserve HIV infection. Abstinence (77.1%), marital fidelity (22.2%) and condom use (0.3%) were the preferred choice for HIV prevention. Although 66.9 percent agreed with the Church