Info- sheet #39 *from the series* ***„For a Better QL of PWH!"***

TOWARDS HIV ELIMINATION

The **XII IAS** *(International AIDS Society)*
conference on HIV science
VII **2023**, Brisbane

(translated from Latvian)

"We are acknowledging the traditional owners of the lands on which we are meeting and paying our respect to the elders past, present and emerging" was a usual start to each of the sessions in Brisbane.

This bi-annual conference gathered more than 5000 scientists, clinicians, public health experts, as well as community educators from all the continents.

Maybe Australia was chosen as it **has reached the 90-90-90** *(90% of PWH aware of their HIV positive status, 90% of those on ART, and 90% of those on ART are virally suppressed)* targets in 2020 already and is on track to achieve the UNAIDS 95-95-95 targets by 2025.
Anecdotally, some HIV specialists in major Australian urban areas say they rarely see new diagnoses!
But not Australia alone. Close to reaching the 95-95-95 global targets are Botswana, Eswatini, Rwanda, Tanzania, Zimbabwe, and 16 other countries as well!

The only region in the world with a rapidly growing HIV epidemic is E Europe and C Asia. There was a special Gilead satellite on Monday: "**E Europe** and C Asia **in crisis**".

At the conference, **WHO** released the **new scientific** and normative **guidance** on HIV. Among others, it states that **viral load *(VL)* is**

- Undetectable = no measurable virus = 0 risk of transmission, minimal risk of vertical transmission;
- Suppressed = ≤1000 copies/ml = almost 0 or negligible risk of transmission;
- Unsuppressed = >1000 ,, = increased vulnerability of becoming ill and transmitting HIV to sexual partner(s) and/or children.

ART

DOR + ISL *(the approved NNRTI doravirine + investigational NRTTI islatravir)* are non-inferior to BIC/FTC/TAF *(bictegravir/ emtricitabine/tenofovir alafenamide)* for initial treatment of HIV-1 and was generally well-tolerated *(oral LBX0102).*

Switching to injectable long-acting CAB+RPV was associated with improved treatment satisfaction, while also providing relief from the fear of disclosure and anxiety surrounding adherence *(poster exhibition TUPEB06).*

Long-acting lenacapavir *(LEN)* is approved for multidrug-resistant HIV-1 in combination with other antiretrovirals for heavily treatment-experienced individuals *(e-poster EPB0230).*

A POTENTIAL HIV CURE

"Geneva Patient" was diagnosed with HIV decades ago, but has been in HIV remission *(i.e., still undetectable)* for 20 months without ARV following a stem cell transplant – and whose **donor** lacked the rare stem cell mutation *(i.e., **had normal or "wild type" stem cells!**)* that has been linked to all known HIV cure cases *(total of 5)* to date *(track A, LB5819).*

There have been several children maintaining undetectable VL for months/years off therapy: a Mississippi baby, S African boy, and cases from Texas and France.

A study of 281 mother-child pairs monitored from delivery following in utero HIV transmission was conducted in S Africa, KwaZulu-Natal. Infants received cART prior to birth via placental transfer and received ART at birth. Exceptionally, **five boys** were identified in whom aviremia was maintained *(for 3-19 months)* despite persistent cART non/bad adherence *(oral OALBX0104).*

Another novel class of drugs for the potential development of an HIV cure strategy is DPP9 inhibitors. Besides HIV-1 infected cells, **the DPP9 inhibitor Val-boroPro *(VbP)*** was also able to significantly increase the clearance of HIV-1 latent reservoirs from PWH, **eliminating 75% of latent reservoirs.** This strategy has the capacity to clear HIV-1 infected cells in vitro, ex vivo, and in vivo *(poster exhibition TUPEA11).*

STATIN BENEFITS!

The biggest story of the conference was the first large-scale clinical study to test a primary cardiovascular prevention strategy in PWH *(having low to moderate risk of cardiovascular disease),* REPRIEVE.

The study's participants who took a daily statin *(in this study: pitavastatin calcium: its patent ends in 2023)* lowered their risk of major adverse cardiovascular events by 35% compared with those receiving a placebo. Adverse drug events observed in the study were like those in the general population taking statins. In short**, statin therapy prevents major CV events in PWH** with low/moderate CV risk and normal-range LDL cholesterol *(symposium SY0601).*

FRAILTY TRANSITION

A study among virologically suppressed PWH aged ≥50 years in Bangkok used 5 frailty criteria *(weight loss, low physical activity, exhaustion, weak grip strength, and slow gait speed)*. Weak grip strength was the predominant frailty phenotype characteristic at year 5. Excessive alcohol consumption, longer duration of ART, and NNRTI regimen at baseline *(compared to PI or INSTI)* were associated with worsening of the frailty stage. Within 5 years frailty of ~1/4 of PWH worsened. However, the majority of frail PWH at baseline showed improvements in severity, suggesting frailty can be reversible *(e-poster EPB0203).*

STIs

While STIs occur frequently in MSM/HIV+, guidelines' recommendations do not include screening for asymptomatic people. A study in Mexico investigated the **prevalence of asymptomatic STIs** in these patients. At least one microorganism was detected in 23% of urethral samples, and more than one – in 12% of patients. The primary reason that gonorrhea and chlamydia infections are untreated is that infected people never have symptoms. Regular screening should be considered in PWH at least every 6-12 months:*EPB0142*

PREVENTION

A novel HIV prevention method for women: the **Dopivirine Vaginal Ring** is the first long-acting, woman-controlled HIV prevention product recommended by the WHO *(e-poster EPD0601).*

Tenofovir douche was well tolerated in young males and showed no adverse events. **TFV douche as PREP** to prevent HIV acquisition via receptive anal intercourse would fill a critical gap in pre-exposure prophylaxis product availability *(e-poster EPC0360).*

COVID-19 VACCINATION

WHO Global Clinical Platform *(>800.000 children & adults)* **showed that PWH had a**

- **54% higher risk of death** during the pre-Delta variant wave,
- 56% - during Delta variant wave, and
- 142% - during Omicron variant wave

compared to the HIV-negative population, with the risk being higher among those with CD4=200.

PWH with at least one dose of COVID-19 vaccination had

- **39% lower risk of death** during the Delta variant wave and
- 38% - during the Omicron variant wave

compared to the unvaccinated.

While the mortality risk among HIV-negative people decreased in the Omicron wave, only a modest reduction was observed in PWH. This highlights the need to implement **WHO guidelines recommending booster vaccines for** populations most at risk of severe COVID-19 outcomes, including **PWH** *(oral OALBC0604).*

Undisentangeably yours –
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