



Ketil Slagstad (born 1983), editor of the Journal of the Norwegian Medical Association.

Photo: Sturlason

Men who have sex with men are at a higher risk of HIV infection.

Pre-exposure prophylaxis may become an instrument in the struggle against rising infection rates

Freedom in a pill?

In Norway, awareness-raising campaigns and promotion of condom use have been the pillars of HIV prevention efforts among men who have sex with men. Internationally, however, things are changing. The World Health Organization (WHO) recommends that persons who are at a high risk of HIV infection, including groups of men who have sex with men, should be offered pre-exposure prophylaxis based on individual risk (1). The drug consists of two components, tenofovir and emtricitabine, and is already being used for treatment of HIV in Norway under the trade name Truvada (2). The drugs were approved for the indication of pre-exposure prophylaxis in the USA in 2012 and will soon be approved also in France (3). It is expected that the Directorate of Health and the Norwegian Public Health Institute will soon make a recommendation to the Ministry of Health and Care Services regarding whether they should be introduced in Norway as well.

The effectiveness of pre-exposure prophylaxis in protecting against infection is well documented. A study from 2010 that included nearly 2 500 participants showed a reduction of 44 % in the number of HIV cases after a median of 1.2 years when comparing daily pre-exposure prophylaxis to placebo (4). Those of the participants who took the drug regularly had a protection effect of 92 %. In a more recent study, altogether 414 men who reported to engage in anal sex with other men on a regular basis without a condom were randomised to pre-exposure prophylaxis or placebo before and after intercourse (5). After a median of nine months, the prophylaxis group had a relative reduction in infection risk of 86 %. A Cochrane review from 2012 confirms that prophylaxis reduces the risk of infection in a high-risk population (6).

There have been concerns about the adverse effects of the drug, such as renal failure and loss of bone tissue (2). The renal failure appears to be reversible when the patient stops taking the drug (7). The issue of resistance development of the HIV virus in patients who become infected while taking the drug has not yet been clarified. Other concerns have focused on whether pre-exposure prophylaxis will cause a hike in other sexually transmitted infections, since the users will cease to use condoms. However, one study refuted this fear of so-called risk compensation – those who believed they were receiving pre-exposure prophylaxis did not have unprotected sex more often (8). The way in which pre-exposure prophylaxis may affect long-term condom use in real life nevertheless remains unclear. Possibly, it could be an alternative for those who do not want to use condoms under any circumstances.

A key issue is the number of people who should be offered this treatment, and whether it should be included in the «blue prescription» scheme (i.e. be offered free of charge). One study found that in light of the guidelines, one in four men who have sex with men

in the USA should be offered pre-exposure prophylaxis (9), but the actual number in the Norwegian population is uncertain. We will need a cost-benefit analysis, and the costs must be assessed against the costs of treating an HIV-positive person for the rest of his life.

Pre-exposure prophylaxis has given rise to controversies, including within the gay community (10). Men who choose to use the prophylaxis have been stigmatised as licentious and irresponsible, despite the clear responsibility they show in wanting to protect themselves. The rhetoric is familiar: in their struggle for sexual liberation through the contraceptive pill, women were similarly stigmatised. So why not just use a condom? There may be numerous reasons for not using a condom, such as intoxication, fear of erectile failure, lack of confidence or assurance that the partner is HIV-negative. If anal sex without a condom – «barebacking» – is a key part of sexual arousal and pleasure, we should also be able to discuss this in an open and non-judgmental manner. People choose different ways of living their lives – including in terms of the risks they are willing to take.

Use of condoms, early contact tracing, treatment of other sexually transmitted infections and early treatment of HIV infections will remain pillars of the efforts to prevent the spread of HIV. However, in order to reach out to everybody we need to recognise that individuals may make informed choices on the basis of individual risk. This ought to be reflected in a diversity of preventive measures. In this context, pre-exposure prophylaxis may come to play an important role.

References

1. Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. September 2015. http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565_eng.pdf?ua=1 [6.12.2015].
2. Truvada. Felleskatalogen. <http://felleskatalogen.no/medisin/truvada-gilead-564879> [4.12.2015].
3. Cairns G. France approves PrEP. <http://aidsmap.com/page/3016707/> [4.12.2015].
4. Grant RM, Lama JR, Anderson PL et al. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *N Engl J Med* 2010; 363: 2587–99.
5. Molina JM, Capitant C, Spire B et al. On-Demand Preexposure Prophylaxis in Men at High Risk for HIV-1 Infection. *N Engl J Med* 2015; 373: 2237–46.
6. Okwundu CI, Uthman OA, Okoromah CA. Antiretroviral pre-exposure prophylaxis (PrEP) for preventing HIV in high-risk individuals. *Cochrane Database Syst Rev* 2012; 7: CD007189.
7. Solomon MM, Lama JR, Glidden DV et al. Changes in renal function associated with oral emtricitabine/tenofovir disoproxil fumarate use for HIV pre-exposure prophylaxis. *AIDS* 2014; 28: 851–9.
8. Marcus JL, Glidden DV, Mayer KH et al. No evidence of sexual risk compensation in the iPrEx trial of daily oral HIV preexposure prophylaxis. *PLoS ONE* 2013; 8: e81997.
9. Smith DK, Van Handel M, Wolitski RJ et al. Vital Signs: Estimated Percentages and Numbers of Adults with Indications for Preexposure Prophylaxis to Prevent HIV Acquisition – United States, 2015. http://cdc.gov/mmwr/preview/mmwrhtml/mm6446a4.htm?s_cid=mm6446a4_w [17.12.2015].
10. Staley P. Gay-on-Gay Shaming: The New HIV War. http://huffingtonpost.com/peter-staley/gay-on-gay-shaming-the-new-hiv-war_b_4856233.html [6.12.2015].