Cabotegravir and Rilpivirine Long-acting Injectable Therapy for Human Immunodeficiency Virus

An Expert Interview with Celia Jonsson-Oldenbüttel

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Combination antiretroviral therapy has significantly improved the life expectancy of people living with human immunodeficiency virus type 1 (HIV-1) infection, but requires daily oral therapy.[1] In 2021, CABENUVA (ViiV Healthcare, Brentford, UK), the first and only complete long-acting regimen for the treatment of HIV-1 infection in adults, received regulatory approval, based on the findings of the phase III ATLAS (Antiretroviral therapy as long-acting suppression) and FLAIR (First long-acting injectable regimen) studies.[2,3]

In an expert interview, Celia Jonsson-Oldenbüttel discusses the advantages of this long-acting treatment regimen and the challenges of its implementation.

Q. What is the incidence of virological treatment failure in HIV therapy and what factors can predict treatment failure?

In recent years we have seen a very low rate of treatment failure. Around 95% of patients achieve viral suppression, which means HIV mRNA below 50 copies. Unfortunately we do not know all the factors that can predict treatment failure, but those we know include previous evidence of viral resistances and problems with adherence to daily dosing..

Q. Could you tell us a little about CABENUVA and its indications for use?

In Germany, this long-acting HIV therapy was approved in May 2021. It comprises intramuscular injections of cabotegravir, an integrase inhibitor, and rilpivirine, a non-nucleoside reverse transcriptase inhibitor, which are administered every 8 weeks. The injections create a deposit in the muscles, which is released slowly over 8 weeks. The indications for this therapy are an HIV virus load below 50 copies/mL, no history of virological treatment failure, and no current or previous evidence of viral resistance against the medication. Current evidence shows that not every patient with HIV is suitable for this therapy; we have learned that even the treating physician cannot predict which patients will be suitable. It is important to make the patient aware of this new therapy form. A switch to injection therapy should only be made if the patient has a specific reason and wish to do so. There are many medical and personal reasons for injection therapy, and it is notable that a large proportion of women and people of other ethnic groups with different cultural backgrounds show great interest in injection therapy.

Q. What are the advantages of taking daily CABENUVA over daily oral therapy from both a medical and patient-oriented point of view?

Long-acting therapy is considered to be safe and non-inferior to daily therapy. Long-acting therapy generates a high level of acceptance and satisfaction among patients, and we see advantages among patients with medical problems such as malabsorption, bulimia, dysphagia and renal dysfunction. We also see advantages in patients with psychiatric disorders such as Alzheimer's disease and other dementias. If patients take additional medications with high potential to interact with the HIV therapy, it is also advantageous to take long-acting therapy.

From the patient-oriented point of view, there is a safety factor in forgetting to take the pills, it is useful for patients who have adherence problems with daily dosing, and patients do not get a daily reminder of HIV infection and therefore stigma. Integration of daily tablet-taking into everyday life is a big problem for many people, such as shift workers and flight attendants. The stigmatization in social and professional environments is a very important factor. In addition, after taking oral therapy for many years, patients can develop tablet fatigue.

Q. What factors should be considered before prescribing CABENUVA?

First, we need a good reason from the point of view of the patient. We need the patient's resistance profile before starting therapy, we need to exclude hepatitis B, and we have to make sure the patient is aware of the potential injection-site reaction, which can involve pain, redness and swelling. We have to schedule the intramuscular injections every 2 months with a deviation of ±7 days, resulting in a higher number of physician visits. If the patient is on vacation or has coronavirus disease 2019 and cannot meet this appointment, we have to arrange bridging therapy, ensuring that they have other tablets with them. In Germany, we also have to discuss the higher cost with the patient before initiating therapy, because it is more expensive.

Q. What barriers are there to successful implementation of CABENUVA in everyday clinical practice and how might they be overcome?

Implementation of injection therapy in everyday clinical practice is associated with various challenges for the patient, as well as the clinical and nursing team. First, injection deployment has to be scheduled, necessitating a good computer record system and a system that issues reminders if an appointment is missed. The drugs have to be stored in a refrigerator and therefore there is a need for a pharmacy that can provide this. Incorrect injection leads to pain and, in the worst-case scenario, the failure of the therapy. Well-trained staff are needed. In patients who are obese (body mass index >30), longer needles are needed in order to ensure the drug enters the muscle and not the fat. It is essential to have adrenaline on hand in case a patient has a severe reaction. The first two injections are given monthly and the 8-week injection schedule may deviate by 7 days, potentially requiring bridging therapy as mentioned above. ❑

1. Solomon DA, Sax PE. Current state and limitations of daily oral therapy for treatment. *Curr Opin HIV AIDS*. 2015;10:219–25.
2. Swindells S, Andrade-Villnueva J-F, Richmond GJ, et al. Long-acting cabotegravir and rilpivirine for maintenance of HIV-1 suppression. *N Engl J Med*. 2020;382:1112–23.
3. Orkin C, Arastéh K, Hernández-Mora MG, et al. Long-acting cabotegravir and rilpivirine after oral induction for HIV-1 infection. *N Engl J Med.* 2020;382:1124–35.