Accidental exposure to HIV can occur in a medical setting such as hospitals and clinics, usually involving needle-stick injuries. In such cases, taking medicines to suppress and limit the spread of HIV within the body is necessary. This use of medication is called PEP—post-exposure prophylaxis.

When a new drug becomes licensed, there is often great temptation to use it as part of PEP. This arises because new drugs have generally not been widely used and so the risk of HIV being able to resist a new medication should generally be low.

Maraviroc (Celsentri, Selzentry) is a relatively new anti-HIV medication that belongs to a family of drugs called entry inhibitors. It was recently approved in Canada, the European Union and the United States as part of combination therapy in cases where HIV positive people have virus that can resist other anti-HIV therapies. Now doctors in Paris, France, have reported a novel and unapproved use of maraviroc: PEP.

Decision time

Because clinical trials have not been undertaken to assess the effectiveness of PEP, the ideal regimen for this use is not clear. Recommendations for PEP can therefore vary from one region to another. In addition, when considering a PEP regimen it is important to take into account the following information from the potential source of exposure:

- viral load
- CD4+ cell count
- treatment history
- resistance test results

Case details

According to the Paris physicians, a medical student injured herself with a needle that had been used on a “heavily treatment-experienced” HIV positive man. At the time of her injury, he had been hospitalized because of HIV-related neurological problems. His basic profile was as follows:

- age – 52
- viral load – 200,000 copies
- CD4+ count – 121 cells
- since 1990 he had been exposed to 13 different anti-HIV drugs
- results of resistance testing suggested that many treatments would not work for him

His current therapy was as follows:

- lopinavir/ritonavir (Kaletra)
- fosamprenavir (Telzir, Lexiva)
- enfuvirtide (T-20, Fuzeon)
- tenofovir (Viread)

Taking all of this information into account, doctors prescribed the following regimen for the medical student:
lopinavir/ritonavir
fosamprenavir
tenofovir
3TC (lamivudine)

She began taking these medications 15 minutes after her possible exposure. Ideally, her physicians would have preferred to include maraviroc in her regimen. However, at the time her injury occurred maraviroc was not approved in France and her doctors had to request access to this drug. Fortunately, their request was quickly approved and the next day lopinavir/r was discontinued and replaced with maraviroc. She took PEP for a total of 28 days.

The doctors reported that the regimen was well tolerated. Moreover, laboratory testing of her blood did not detect any toxicity from the medications. Importantly, six months after her needle-stick injury, testing revealed that she was HIV negative.

The report from France is the first published case in which maraviroc was used as PEP. It underscores the value of new drugs and their potential for PEP. As needle-stick injuries are relatively common in healthcare settings, in the future we expect to see more reports of maraviroc and other new drugs, such as raltegravir (Isentress), used as part of PEP.

—Sean R. Hosein

**REFERENCES:**


Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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Production of this content has been made possible through a financial contribution from the Public Health Agency of Canada.

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