simeprevir (Olysio®)

Chronic hepatitis C: an option for some patients

Abstract

- The choice of treatment for patients with chronic hepatitis C depends on the viral genotype and clinical situation. Simeprevir (Olysio®, Janssen Cilag) inhibits the viral protease of hepatitis C virus (HCV) genotypes 1 and 4. Simeprevir has been authorised in the European Union for use in combination with other antivirals in adults with chronic hepatitis C.

- In HCV genotype 1 infection, two trials in treatment-naïve patients and two trials in patients in whom the peginterferon alfa and ribavirin combination had failed or who had relapsed showed that virological efficacy was enhanced when simeprevir was added to the peginterferon alfa and ribavirin combination. Simeprevir was less effective when the viral protease NS3 carried the Q80K substitution.

- An indirect comparison of the available data suggests that simeprevir has about the same virological efficacy as sofosbuvir and boceprevir, while a trial reported in a conference abstract suggests that it is “non-inferior” to telaprevir.

- Results of trials evaluating simeprevir without peginterferon alfa should be available in 2015. Simeprevir has not been evaluated in patients in whom triple-drug therapy has failed. Cross-resistance is likely between simeprevir and other viral protease inhibitors. There are no controlled trials of simeprevir in patients with HCV genotype 4 infection.

- The main known adverse effects of simeprevir are skin reactions (including rash and pruritus), photosensitivity, bilirubin elevation, nausea and dyspnoea. These adverse effects can be severe and even fatal. An increased risk of infections is also likely. Simeprevir is a substrate of P-glycoprotein and other transport proteins, as well as of cytochrome P450 isoenzyme CYP3A4, creating a risk of multiple drug interactions. Simeprevir bioavailability seems to be higher in patients of Asian origin, exposing them to more adverse effects and warranting the use of a lower dose.

- Simeprevir is taken for 12 weeks, one tablet a day. The daily number of tablets is the same as with sofosbuvir and smaller than with boceprevir and telaprevir.

- In practice, when triple-drug therapy is considered for chronic hepatitis C due to HCV genotype 1 but sofosbuvir cannot be used, simeprevir seems preferable to other viral protease inhibitors when the virus does not harbour the Q80K substitution. Evaluation of simeprevir must continue in patients in whom triple-drug therapy has failed and in patients with HCV genotype 4 infection.

POSSIBLY HELPFUL

Simeprevir is active in patients with hepatitis C due to genotype 1 strains lacking the Q80K substitution. When triple-agent therapy is warranted but sofosbuvir cannot be used, adding simeprevir to the peginterferon alfa-ribavirin combination increases the chances of achieving a sustained virological response. Simeprevir is slightly better tolerated than boceprevir and telaprevir. The efficacy of simeprevir on other genotypes was not known in late 2014.

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simeprevir capsules

Olysio®

- Simeprevir 150 mg per capsule

HCV antiviral; viral protease inhibitor

- Indication: “In combination with other medicinal products for the treatment of chronic hepatitis C (CHC) in adult patients”.

[EU centralised procedure]

Full review available on request to subscribers. 7 pages, 24 references

COMMON STEM -pamide

According to the nomenclature used to develop international nonproprietary names (INNs), established by the World Health Organization (WHO), the INNs of diuretics derived from sulfaamylbenzoic acid end in the common stem -pamide (1,2).

On 12 November 2014, the WHO list of INNs included 6 drugs of this type (1,3). Two of them are marketed in France for the treatment of hypertension: clopamide in a fixed-dose combination with pindolol, and indapamide used alone and in a fixed-dose combination with perindopril or amlodipine (1,3).

Note that the suffix “mide”, which is not on the WHO list of common stems, is also found in the INNs of several other drugs used in various situations (1). For example: furosemide, a diuretic, the sulfonylurea glibenclamide, the cytotoxic drug ifosfamide, and lenalidomide, a teragogenic immunosuppressant.

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Selected references from Prescrire’s literature search.
3- “Substance names ending with pamide”, mednet.who.int accessed 12 November 2014: 1 page.