



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

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Press Office

Press release

European Medicines Agency concludes that benefit-risk balance of Invirase remains positive

Agency recommends reduced starting dose of Invirase in treatment-naïve patients

The European Medicines Agency's Committee for Medicinal Products for Human Use (CHMP) has reviewed all available data on Invirase (saquinavir) and the potential risk of arrhythmia, and concluded that the benefit of the medicine continues to outweigh its risks. However, the Committee has recommended that treatment-naïve patients should take a reduced dose of Invirase during the first week of treatment, as a precautionary measure.

Ritonavir-boosted Invirase in combination with other antiretroviral medicines is indicated for the treatment of HIV-infected adult patients.

The Committee started this review following the results of a study conducted by the marketing authorisation holder of Invirase, Roche Registration Ltd, showing that Invirase prolonged the QT and PR interval in healthy volunteers. In June 2010, the CHMP recommended restrictions on the use of Invirase, including a contra-indication in patients at high risk of arrhythmia and in patients using other medicines that may cause QT or PR prolongation. Warnings for patients at moderate risk of arrhythmia, together with recommendations for electrocardiogram (ECG) monitoring, were also agreed. However, the CHMP still had concerns about the magnitude of the observed QT and PR interval changes and the potential clinical impact on the safe and effective use of the medicine, and carried out a full review of the benefits and risks of Invirase.

The Committee reviewed all available clinical and preclinical data on the cardiovascular safety of Invirase and discussed any additional measures that might be necessary to ensure its safe and effective use. The CHMP noted that the effectiveness of Invirase has been demonstrated in several clinical studies. Although the dedicated study in healthy volunteers did show QT and PR interval prolongation, this signal was not confirmed in post-marketing safety reports on Invirase. Invirase was first authorised in 1996 and had an exposure worldwide of approximately 1 million patient-years.



The risk of QT and PR interval prolongation is dose dependent, and is expected to be highest in treatment-naïve patients starting Invirase therapy. To minimise the risk of arrhythmia, the CHMP recommended a reduced dose for these patients in the first week of treatment. Also, the CHMP asked Roche to investigate the potential risk of arrhythmia in treatment-naïve patients receiving the reduced dose of Invirase in combination with other antiretroviral medicines in a new study.

Notes

1. [This press release together with all relevant documents is available on the European Medicines Agency's website.](#)
2. The review of Invirase was initiated at the request of the European Commission under Article 20 of Regulation (EC) No 726/2004, on 24 June 2010.
3. More information about this review is available in a question-and-answer-document.
4. More information about Invirase is available in the European public assessment report (EPAR).
5. This press release, together with other information on the work of the European Medicines Agency, can be found on the Agency's website: www.ema.europa.eu.

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