



Questions and answers on the recommendation to restrict the use of oral formulations of moxifloxacin-containing medicines

The European Medicines Agency (EMA) has completed a review of new data on the safety of oral formulations (taken by mouth) of moxifloxacin-containing medicines. The Agency's Committee for Medicinal Products for Human Use (CHMP) has concluded that the benefits of these medicines for the treatment of acute bacterial sinusitis, acute exacerbation of chronic bronchitis and community-acquired pneumonia continue to outweigh their risks, but their use should be restricted. The review was carried out under an 'Article 107' procedure¹.

What is moxifloxacin?

Moxifloxacin is an antibiotic. Oral formulations of moxifloxacin are used to treat the following infections:

- acute exacerbation (flare-up) of chronic bronchitis (long-lasting inflammation of the airways in the lungs);
- non-severe cases of community-acquired pneumonia (an infection of the lungs that is caught outside of hospital);
- acute bacterial sinusitis (short-lived infection of the sinuses, air-filled passageways in the bones around the nose and eyes).

In some Member States, they are also used to treat mild to moderate pelvic inflammatory disease (a type of infection of the upper part of the female genital tract).

Moxifloxacin belongs to the group 'fluoroquinolones'. It works by blocking an enzyme that bacteria use to make more DNA. By doing this, it stops the bacteria that are causing an infection from growing and multiplying.

Oral formulations of moxifloxacin have been available for nearly 10 years in all European Union (EU) Member States as Avelox and Avalox, as well as other invented names. They have been authorised by regulatory authorities in Member States via national procedures and 'mutual recognition procedures'². Moxifloxacin is also available as an injection. This formulation was not included in this review.

Why were moxifloxacin-containing medicines reviewed?

Following a review of the safety of oral formulations of moxifloxacin-containing medicines carried out by the German medicines regulatory authority, including eight cases of liver problems that led to the patients' death and were suspected to be related to moxifloxacin, the United Kingdom (UK) medicines regulatory authority became concerned over the benefit-risk balance of these medicines. In particular, the UK authority was concerned over the use of these medicines for the treatment of acute bacterial sinusitis, acute exacerbations of chronic bronchitis and community-acquired pneumonia.

Consequently, in June 2008 the UK authority initiated a procedure under Article 107, and asked the CHMP to prepare an opinion on whether the current indications for oral formulations of products containing moxifloxacin should be maintained, changed or removed from the marketing authorisations across the EU.

¹ Article 107 of Directive 2001/83/EC as amended.

² When a medicine is first authorised in one Member State (the 'reference MS') whose decision is then recognised in all other MSs ('concerned MSs').

Which data has the CHMP reviewed?

The CHMP has reviewed all of the available information on the safety of moxifloxacin-containing medicines, particularly their side effects affecting the liver. The review concentrated on these medicines when they are used to treat acute bacterial sinusitis, acute exacerbation of chronic bronchitis and community acquired pneumonia. This included information provided by the market leader from clinical trials, observational studies (studies looking at the effects of medicines as they are used by patients), information published in scientific journals, and ‘spontaneous reports’ of side effects from patients to the companies that make the medicines or health authorities.

What are the conclusions of the CHMP?

The CHMP noted that the data showed the effectiveness of moxifloxacin in treating acute bacterial sinusitis, acute exacerbation of chronic bronchitis and community-acquired pneumonia. The CHMP concluded that the benefits of these medicines continue to outweigh their risks for these indications, but, due to the safety concern of increased liver toxicity, the Committee recommended that their use should be restricted. In acute bacterial sinusitis and acute exacerbation of chronic bronchitis, oral formulations of moxifloxacin-containing medicines should only be used when treatment with other antibiotics cannot be used or have stopped working. In community-acquired pneumonia, these medicines should only be used when treatment with other antibiotics cannot be used.

The CHMP also recommended that the warnings in the product information be strengthened to include information on liver problems, heart problems in women and older patients and diarrhoea.

What are the recommendations for patients and prescribers?

- The use of injectable moxifloxacin is not affected by this review.
- Doctors should prescribe oral formulations of moxifloxacin-containing medicines for acute bacterial sinusitis and acute exacerbation of chronic bronchitis only when the infection has been properly diagnosed and when other oral antibiotics cannot be used or have stopped working.
- In community-acquired pneumonia, doctors should prescribe oral formulations of moxifloxacin-containing medicines only when treatment with other antibiotics cannot be used.
- Doctors should consider official guidance on the use of antibacterial agents.
- Patients who have any questions should speak to their doctor or pharmacist.

A European Commission decision on this opinion will be issued in due course.