August 2023

Systemic and inhaled fluoroquinolone antibiotics: to prescribe in severe infections only

Systemic fluoroquinolones: Levofloxacin (Tavanic)

Inhaled fluoroquinolones: not applicable for Sanofi

Dear Healthcare professional,

Sanofi in agreement with the National Medicines and Poisons Board (NMPB)would like to remind you of the following:

- **Disabling and potentially irreversible serious side effects and restrictions on use**
- **Aortic aneurysm and dissection, and heart valve regurgitation/incompetence**

Summary

- **A recent EMA-funded study ("Impact of European Union Label Changes for Fluoroquinolone Containing Medicinal Products for Systemic and Inhalation Use" (EUPAS37856)) suggests that fluoroquinolones continue to be prescribed outside of the recommended uses.**
- **Systemic and inhaled fluoroquinolones should NOT be prescribed for:**
  - **patients who have previously had serious adverse reactions with a quinolone or fluoroquinolone antibiotic;**
  - **non-severe or self-limiting infections (such as pharyngitis, tonsillitis and acute bronchitis);**
  - **mild to moderate infections (including uncomplicated cystitis, acute exacerbation of chronic bronchitis and chronic obstructive pulmonary disease, acute bacterial rhinosinusitis and acute otitis media) unless other antibiotics that are commonly recommended for these infections are considered inappropriate;**
  - **non-bacterial infections, e.g. non-bacterial (chronic) prostatitis;**
  - **preventing travellers' diarrhoea or recurrent lower urinary tract infections.**
- **Systemic and inhaled fluoroquinolones are associated with very rare, serious, disabling, long-lasting and potentially irreversible adverse reactions. These products should be prescribed only for approved indications and after careful assessment of the benefits and risks in the individual patient.**
- **Healthcare professionals are also reminded of the known risks of aortic aneurysm and dissection, and of heart valve regurgitation/incompetence with systemic and inhaled fluoroquinolones.**

Background on the safety concern

Risk of disabling and potentially irreversible serious side effects and restrictions on use

In 2019 the EMA considered it necessary to restrict the use of systemic and inhaled fluoroquinolone medicines following an EU-wide review conducted in 2018 to evaluate the risk of serious and long-lasting (lasting months or years), disabling and potentially irreversible adverse reactions mainly affecting the musculoskeletal and nervous system.

These serious adverse reactions can include tendinitis, tendon rupture, arthralgia, pain in extremities, gait disturbance, neuropathies associated with paraesthesia, depression, fatigue, memory impairment, hallucinations, psychosis, sleep disorders and impaired senses (hearing, vision, taste and smell). Tendon damage (especially to Achilles tendon but other tendons can also be involved) can occur within 48 hours of commencing treatment or the effects can be delayed for several months after stopping treatment.

An EMA-funded study ("Impact of European Union Label Changes for Fluoroquinolone Containing Medicinal Products for Systemic and Inhalation Use" (EUPAS37856)) analysing prescribing rates for fluoroquinolones was conducted in six European healthcare databases (from Belgium, France, Germany, the Netherlands, Spain and the United Kingdom).

The study suggested that fluoroquinolones are still being used outside the authorised indications.

- **Healthcare professionals** are reminded to advise patients:
  - of the risk of these serious adverse reactions;
  - of the potential long-lasting and serious nature of these effects;
  - to immediately seek advice from a physician at the first signs of these serious adverse reactions.

- **Special caution** should be taken in patients who are treated concurrently with corticosteroids; in the elderly; in patients with renal impairment; and in patients who have undergone solid organ transplants, as the risk of fluoroquinolone-induced tendinitis and tendon rupture may be exacerbated in these patients.

Risk of aortic aneurysm and dissection, and risk of heart valve regurgitation/incompetence

- **Healthcare professionals** are also reminded of the following known risks of systemic and inhaled fluoroquinolones:

  - **Aortic aneurysm and dissection**, particularly in older people and/or patients with conditions predisposing to aortic aneurysm and dissection.
  - **Heart valve regurgitation/incompetence,** in patients with risk factors and/or conditions predisposing to heart valve regurgitation/incompetence.

Call for reporting

Healthcare professionals are encouraged to report adverse events in patients taking fluoroquinolone antibiotics to ***The National Medicines and Poisons Board in Sudan***:

The National Medicines and Poisons Board

E-mail: pv.team.24@nmpb.gov.sd

Hotline: 4545

And Company contact point

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Address: 3 El Massaneh st. Zeitoun, Cairo, P.O box: 1486
Tel: +2 022860000
E-mail: pharmacovigilance.eg@sanofi.com

Annexes

"Impact of European Union Label Changes for Fluoroquinolone Containing Medicinal Products for Systemic and Inhalation Use" (EUPAS37856)