



Practice sting 2022-18

Practice sting Chronic nitrofurantoin use

this Practice sting is especially interesting for prescribers and pharmacists

Recurrent urinary tract infections are frequent. Sometimes a patient is prescribed long-term antibiotics for this kind of infections in a different dosage than for acute infections.

Many antibiotics are unsuitable for long-term use. The detection of long-term users has not yet been realized in the pharmacovigilance system of the pharmacy. There is a risk that these medicines are unintentionally used for a long time and as a result will cause toxic side effects.

Notification

A 55-year-old woman has repeatedly requested repeat prescriptions for nitrofurantoin from her GP. The GP allowed these repeat prescriptions to continue and the pharmacy delivered. The GP discovers this when assessing the lab values and in particular the liver functions of the woman. After a consultation with a specialist, the general practitioner discontinues the nitrofurantoin. The woman may have suffered liver damage from taking nitrofurantoin for too long.

Analysis

According to the Dutch NHG Standard for Urinary Tract Infections (2020), nitrofurantoin (1x daily 50-100 mg) or trimethoprim (1x daily 100 mg), whether or not after intercourse, can be considered for recurrent infections (3 or more per year). The maximum period of use is 6 to 12 months. The Standard warns of rare, but serious, side effects with long-term use of nitrofurantoin. This concerns a – sometimes irreversible – polyneuropathy, of which paresthesia is a first symptom. Also a pulmonary syndrome, with shortness of breath and tickling cough as complaints (the syndrome can lead to irreversible fibrosis) and liver toxicity may occur.

In the case of dyspnoea or dry cough in nitrofurantoin users, it is advised to immediately discontinue use¹.

Recommendations

For prescribers

- Stay alert to the duration of chronic use of nitrofurantoin. Particularly during long-term treatment, close monitoring should be carried out for side effects on the lungs, liver (check for signs of hepatitis/liver damage), blood (especially haemolysis) and peripheral nervous system. Discontinue nitrofurantoin after up to 12 months.

For pharmacists

- Evaluate patients on long-term nitrofurantoin use. Make agreements about long-term use of nitrofurantoin with the GPs. As long as no pharmacovigilance is available to map chronic nitrofurantoin use, it is recommended to map these users every year and to present the results to the prescribers for evaluation.
- If the pharmacy system can operate with a stop date, set it. Be aware that a stop date is not always included in electronic communication.

¹ Milazzo E, Orellana G, Briceño-Bierwirth A, Korrapati VK. Acute lung toxicity by nitrofurantoin. *BMJ Case Rep.* 2021;14(4):e237571.