Nifuroxazide: serious immunoallergic reactions

At the beginning of 2017, the French regulatory agency (ANSM) published the results of a pharmacovigilance survey about nifuroxazide (1). This is a nitrofuran, closely related to nitrofurantoin. Nifuroxazide is used as an intestinal “anti-infective” agent in cases of diarrhoea, although its efficacy has not been demonstrated. It has been marketed in France since 1964 (1,2).

The pharmacovigilance survey covered all the data in the French pharmacovigilance database from the time of its initial marketing up to March 2016, as well as reports sent to the companies (1).

645 reports of adverse effects were analysed, of which 288 were serious. Among the 97 serious immunoallergic reactions, there were 16 cases of anaphylactic shock and 41 of angioedema. Among the 61 serious cutaneous adverse effects, there were 27 cases of severe drug-induced skin reaction for which nifuroxazide was the only suspect drug, including 2 cases of acute generalised exanthematous pustulosis and one case of toxic epidermal necrolysis (1).

The other serious adverse effects were haematological disorders (42 cases) including agranulocytosis, thrombocytopenia and haemolytic anaemia, liver damage (24 cases), neurological disorders (17 cases), gastrointestinal disorders (14 cases) and renal disorders (9 cases), and one case of diffuse interstitial lung disease (1).

Levothyroxine: panic attacks

In mid-2017, the Uppsala Pharmacovigilance Centre analysed 187 reports of panic attacks attributed to levothyroxine, recorded in the pharmacovigilance database of the World Health Organization (WHO). In several of these cases, the disorders stopped after dose reduction or temporary discontinuation of levothyroxine by the patient. These problems recurred in several patients after reintroduction of levothyroxine (1).

Levothyroxine is a thyroid hormone with a narrow therapeutic range. Signs of overdose can develop even with very slight increases in plasma concentration (2). They consist principally of palpitations, nervousness, tremors, hyperactivity, increased sweating and insomnia. These symptoms are similar to manifestations of anxiety. The onset of these symptoms seems, in some predisposed patients, to trigger a panic attack, with an intense feeling of discomfort, anxiety and fear together with symptoms such as chest pain, dizziness and palpitations (1).

In several reports, the involvement of levothyroxine was not recognised, resulting in a long-term impairment of the patient’s quality of life. In some cases, the patient stopped taking levothyroxine against medical advice, and the problems were alleviated. Sometimes the plasma concentrations of levothyroxine were within the target range (1).

Panic attacks are not mentioned in the Summary of Product Characteristics (SPC) of brands of levothyroxine marketed in France (3).

In practice Patients should be made aware of these adverse effects so that they can make the connection between experiencing these problems and taking levothyroxine. Careful titration of the dose is essential, and given its long half-life, a time interval of 6 to 12 weeks should be allowed after each dose adjustment.