Mizolastine: prefer cetirizine or loratadine

More adverse effects with mizolastine.

In France, mizolastine, a so-called non-sedative, non-antimuscarinic antihistamine, is authorised for oral administration to adults and children over 12 years of age, as symptomatic treatment for seasonal or perennial allergic rhinoconjunctivitis, and for urticaria (1,2). A copy is also available, with the same indications as the originator (1).

Oral antihistamines are only moderately effective in patients with severe symptoms of allergic rhinitis, allergic conjunctivitis or urticaria. Non-sedative, non-antimuscarinic antihistamines such as cetirizine and loratadine are the best choices. Mizolastine is no more effective than either of these drugs (2-5).

The adverse effect profile of mizolastine consists mainly of sedative effects in some patients (especially the elderly), fatigue, headache, gastrointestinal disorders, dry mouth, and increased appetite leading to weight gain (1,2,5). Mizolastine can also cause cardiac arrhythmias with QT prolongation, as well as bradycardia and tachycardia (2,6). The risk of QT prolongation appears to be lower with cetirizine and loratadine (7). Unlike these latter drugs, in vitro studies suggest that high mizolastine concentrations close potassium channels, an effect compatible with a risk of cardiac arrhythmias (8).

Mizolastine is metabolised by cytochrome P450 isoenzyme CYP3A4. To avoid potentiating its effects, including its cardiac adverse effects, mizolastine must not be combined with inhibitors of this enzyme, which include various macrolides and azole antifungals. Mizolastine must also be avoided in patients with risk factors for torsades de pointes (2.5).

In practice, mizolastine has a less favourable harm-benefit balance than other non-sedative, non-antimuscarinic antihistamines. Cetirizine and loratadine are better options for patients requiring oral therapy but should not be overused.

Desloratadine, loratadine: aggression

Neuropsychiatric reactions.

In February 2015, the Netherlands Pharmacovigilance Centre, Lareb, reported 22 cases of mental disorders attributed to desloratadine, a "non-sedating" antihistamine without antimuscarinic activity. These disorders included abnormal behaviour such as agitation, aggression, violent thoughts, anxiety and depressed mood (1). Six reports involved children under 12 years of age. The disorders resolved after desloratadine cessation in 16 patients and recurred on rechallenge in 4 cases. In 21 cases, desloratadine was the only suspected drug.

In March 2015, the World Health Organization (WHO) Uppsala pharmacovigilance database contained 17 reports of aggressive reaction attributed to desloratadine. Ten involved children, including 8 aged 8 years or under. The disorders recurred in 2 children who were re-exposed at least once to desloratadine. Desloratadine is a metabolite of loratadine and, according to Lareb, the WHO database also contains reports of aggressive reactions attributed to loratadine (2,3). As of early 2016, the SPC of the loratadine-containing product marketed in France under the brand name Claritine states that “nervousness” occurred in 2.3% of exposed children, and more frequently than in children who received placebo (4).

In practice, loratadine and desloratadine are antihistamines presented as having selective effects on peripheral rather than central H1-receptors. It is best to inform patients or their carers that these drugs also have neuropsychiatric effects.

Dextromethorphan: neurological disorders in children

Do not use in young children.

In 2015, the Uppsala World Health Organization (WHO) pharmacovigilance centre published a review on adverse drug reactions in children attributed to dextromethorphan, an opioid used as an antitussive (1). In February 2015, the Uppsala pharmacovigilance database contained 110 reports of neurological disorders in children under the age of 6 years: 29 cases of ataxia, and 10 cases of coma in children aged 2 years or less, as well as reports of convulsions and dyskinesia. When the search was broadened to include all children under the age of 18 years, 51 cases of ataxia and 19 cases of coma were identified. Most of these reports did not involve accidental intake or overdose.

In France, several dextromethorphan-containing products are approved for cough in children from the age of 30 months or 6 years (2). This opioid should not be used lightly, and it is important to remind parents that it should not be given to young children (3).

Selected references from Prescrire’s literature search.
5. ANSM “RCP-Clarityne comprimés” 7 January 2015: 4 pages.

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Selected references from Prescrire’s literature search.
1- ANSM “RCP-Mizollen” 3 janvier 2014 • RCP-Mizoloxer 8 November 2013: 10 pages.
4- Prescrire Editorial Staff “Seasonal allergic rhinitis: limited effectiveness of treatments” Prescrire Int 2008; 17 (93): 28-32.

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