Anaphylactic shock induced by mephenesin

Choc anaphylactique induit par la méphénésine

Mephenesin is an aromatic glycerol ether, which decreases polysynaptic transmission in the spinal cord and brain stem. It is used as a skeletal muscle relaxant in the treatment of multiple sclerosis, Parkinsonism and acute muscle strain [1]. Usually, mephenesin is well tolerated and the common side effects are rashes, flushing of the face, nausea, vomiting, and somnolence [1]. Anaphylactic shock induced by mephenesin is exceptional. We report one case of anaphylactic shock induced by oral intake of mephenesin. This case was notified to the National Centre of Pharmacovigilance of Tunis the 4th of June 2012.

Case report
On May 2012, a 25-year-old man was operated for a fracture of the left lower limb. He has no personal or family history of atopy. For knees pain, he was prescribed ketoprofen (Ketofen 50\textsuperscript{mg}) one tablet \times 3/day and mephenesin (Decontractyl 500\textsuperscript{mg}) one tablet \times 2/day.

On September 29th, 2010, he received ketoprofen (1 tablet \times 2) without any incident. The last tablet was taken on 9 pm. The next day, (September, 30th) he took one tablet of mephenesin at 9 am for the first time. He did not take ketoprofen. Ten minutes later, he presented facial edema, pruritis and dyspnea. He was hospitalized and physical examination revealed generalized edema without skin eruption, tachycardia and low blood pressure (80/40). The diagnosis of anaphylactic shock was retained.

He had been treated with systemic corticotherapy, adrenaline, and oxygenotherapy, with a good evolution within few hours. Ketoprofen and mephenesin were stopped. On March 2011, prick test (0.5 mg/mL than 0.5 mg/mL) and intradermal reactions (0.05 mg/mL than 5 mg/mL) and intradermal reactions (0.05 mg/mL than 5 mg/mL) were negative. The patient refused any tests with mephenesin.

Discussion
The role of mephenesin was retained with a possible intrinsic imputability score (or 12) according to the French method of imputability, this score is based on chronologic and semiologic criteria [2]:
- a suggestive delay (few minutes after its intake);
- a good evolution after drug withdrawal;
- a less high score of imputability for ketoprofen (11) or doubtful in front of an only compatible delay (> 12 h);
- the negative skin tests with ketoprofen.

Untoward reactions to mephenesin have occurred mainly after prolonged administration or overdoses in the case of Fantom et al., the patient was found dead after a 6-month treatment with mephenesin [3].

In literature, allergic reactions, mainly cases of cutaneous eruption (contact dermatitis, erythema multiforme like eruptions) were notified with mephenesin [4,5]. In those cases, mephenesin were used by topical route. Immune-allergic reactions associated with oral mephenesin were described in one case of fever on the fourth day of mephenesin carbamate administration with positive rechallenge after 24 h [6].

Anaphylactic shock is cited in the summary of product characteristics, but in literature, we only found one case that occurred after rechallenge with mephenesin [7]. This case deals with a 41-year-old woman who presented chest tightness and upper limb numbness while treated by mephenesin. Aspirin–phenacitin–caffeine (APC) and tetracycline. The rechallenge of mephenesin was positive.

Skin testing is a practical, reliable and well-tolerated method for establishing IgE-mediated diseases [8]. The negative skin tests with ketoprofen and the low intrinsic score of this drug make its role unlikely. We could not undergo mephenesin tests because the patient did not agree.

Conclusion
The mephenesin is used commonly. It can be associated with anaphylactic shock. To our knowledge, only one case of anaphylactic shock was described in literature.

Disclosure of interest : the authors declare that they have no conflicts of interest concerning this article.

References


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Received 1 August 2013
Accepted 20 January 2014

http://dx.doi.org/10.1016/j.lpm.2014.01.017
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