Acute generalized exanthematous pustulosis with mephenesin balm

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, Parkinson’s disease or acute muscle strain [1,2]. Mephenesin is associated to methyl nicotinate in the Décontractyl® Balm. The methyl nicotinate has a rubifacient effect. Usually, the Décontractyl® Balm is well tolerated and associated with local cutaneous reactions. The presence of terpenic products in this balm may cause general side effects such as convulsions or confusions. Acute generalized exanthematous pustulosis (AGEP) is exceptional with this balm.

We report a case of AGEP induced by topical application of Décontractyl® Balm. This case was notified to the National Centre of Pharmacovigilance of Tunis on the 10th of June 2012.

Case report

We relate a case of a 47-year-old man with history of eczema and local erythema episodes. He does not take any chronic treatment. On the 24th May 2012, by self-medication, he applied on his right flank the Décontractyl® Balm for myalgia. On the 25th May, an erythema localized on his right flank appeared which extended rapidly on the same day into small non-follicular pustules on the whole body. He had no mucous lesions. On the 26th of May, the patient was hospitalized. The dermatological examination found a generalized erythema saving the face, the neck, the folds (beside inguinal, popliteal), the palms and the soles. This erythema was well limited and scattered with non-follicular pustules measuring 0.3 cm of diameter and which became confluent in some places. This eruption was accompanied with fever around 38.5 °C. Hyperleucocytosis (30,000/µL) and high neutrophil count (27,000/µL) was found in the biological tests. An hypereosinophilia was also seen (600/µL). Biopsy found subcorneal pustules with a perivascular infiltrates of neutrophils and some eosinophils. Psoriatic changes as acanthosis and papillomatosis were absent. The diagnostic of AGEP was retained. These features resolved spontaneously in about 3 to 4 days. Patch test (1% pet whole drug) was performed on the 1st of December 2012. The patch was applied on the back and was positive after 30 min with an erythematous papule.

Discussion

AGEP is a severe cutaneous reaction which can be induced by drugs. Systemic drugs are more often responsible such as antibiotics (macrolides, betalactamin antibiotics) [1,2]. Exceptionally topic drugs were incriminated (bufexamac, lindane) [1,3,4]. In this case, the EuroSCAR score of AGEP [5] was 09 “definite” (the highest score) in front of:

- non-follicular pustules on the whole body with hyperthermia;
- the abrupt onset and the rapid evolution of the eruption (< 15 days);
- the subcorneal pustules and the perivascular infiltrates with neutrophils and some eosinophils on the biopsy;
- the high count of neutrophils above 7000/µL.

The responsibility of Décontractyl® was retained in front of: the temporal relation delay with the single drug administrated; the beginning of the lesions at the site of application of the balm; the positive patch test to mephenesin and methyl nicotinate (erythema and edema). Local mephenesin application is associated in literature with local eruptions in few cases. All of them appeared in the mephenesin zone of application. It deals with purpuric dermatitis in one case [6], local vascularitis in another case [7] and erythema multiform in some other cases [8]. We have achieved a patch test with the whole product. Patch test in AGEP is fruitful. They have a significant value if they are positive [9]. An only mephenesin-patch test should be done to prove the imputability of the active principle.

In conclusion, the Décontractyl® Balm is used commonly while its benefits are not yet very well established. It can be associated with serious adverse events. The balance benefits/risk of this product should be reconsidered after this second case of AGEP.
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References


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