□ LETTERS TO THE EDITOR □

Intoxication with Over-the-Counter Antitussive Medication Containing Dihydrocodeine and Chlorpheniramine Causes Generalized Convulsion and Mixed Acidosis

Key words: chlorpheniramine, convulsion

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To the Editor I read with great interest the recently published article by Murao et al (1) in the "Intern Med", regarding the case of a 35-year-old man who presented with generalized convulsion and mixed acidosis, attributed to the abuse of SS-BRONTM. As I really find the issue very interesting, I would like to comment briefly on this report.

According to the authors, the ingredient of SS-BRONTM responsible for the observed generalized convulsion was the antihistamine chlorpheniramine (CPA). More specifically, it is suggested that due to its well-known anticholinergic properties CPA can produce central stimulating effects which could be incriminated for the induction of generalized con-

vulsion.

Indeed, CPA is a first-generation antihistamine which is known to possess anticholinergic properties. Moreover, already in studies conducted in the 1960s CPA was shown to be a strong serotonin reuptake inhibitor, while in a recent work of our laboratory team it was demonstrated for the first time that CPA is also a postsynaptic 5-HT_{1A} receptor agonist (2). On the other hand, it is well established that 8-hydroxy-2-(*d-n*-propylamino) tetralin (8-OH-DPAT), a selective 5-HT_{1A} receptor agonist, produces seizures in mice and rats (3, 4), an action which has been attributed mainly to its agonistic properties on 5-HT_{1A} receptors. Likewise, it is tempting to speculate that the generalized convulsion observed in the patient presented by Murao et al could be, at least in part, due to the serotonergic properties of CPA.

In conclusion, I believe that Murao et al should refer to the above-mentioned studies (2-4) in their article, in order to strengthen their conclusions, giving at the same time a second possible mechanistic explanation of the CPA-induced generalized convulsion.

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References

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