

N° 83103 Cardiac safety of so called "Energy Drinks"

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M-D. Drici¹, A. Spreux¹, B. Balain¹, F. Rocher¹, I. Bordes², A. Dopter², I. Margaritis² - (1) Nice University Medical Center - Hôpital de Cimiez, Pharmacology-Pharmacovigilance, Nice, France (2) French Agency for Food, Environmental and Occupational Health Safety, ANSES, Maisons-Alfort, France

Over 50 million litres of more than 120 so called "energy drinks" have been consumed in 2011 in France. Because of their association with adverse events (EDAes), these drinks have recently raised national awareness in France. They are sodas enriched with an array of substances already present in food, such as caffeine, taurine and vitamins. Each individual drink usually contains up to the caffeine content of two espressos. When taken in great quantity, they are suspected to induce a sensation of excitation and facilitate among others, serious adverse events in predisposed subjects.

Material of methods: Spontaneously reported EDAes in France have been collected between 1/1/2009 and 30/11/2012 in the context of national nutritional vigilance scheme. Their causal relationship with the different brands of drinks have been assessed by means of a specific scale.

Results: Among the 257 adverse events that have been notified during the survey, 45 were excluded for lacking data. Most of the EDAes were of cardio-vascular origin (n=95), followed by psychiatric (n=74) and neurological (n=57). In 54 cases (25.5%) the causality of ED was deemed possible, in 18 (8.5%) likely, and 7 cases (3.3%) very likely. Cardiovascular cases included cardiac arrests, sudden or unexplained deaths (n=9), and mainly other rhythm disorders (n=43), angina (n=13) and hypertension (n=5). "Caffeine syndrome" associating tachycardia, anxiety, and headaches was present in 60 of the cases.

In conclusion, "energy drinks" are associated with adverse events among which cardiovascular events. Due to a potentially strong underreporting bias, it seems necessary to inform certain predisposed subjects of such risks, as unknown amounts of caffeine resulting from "serial drinks" in dance clubs or during physical exercise, two popular yet particularly risky situations, could facilitate the emergence of complex cardiac arrhythmias. Moreover, health professionals should be aware of EDAes and the necessity to report them in a specific vigilance system, such as Nutrivigilance in France.