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Can *Atropa belladonna* L. poisoning result in acute subdural hematoma?

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I read with interest the case series reported by Cikla et al[1] that has recently been published in *Human and Experimental Toxicology*. They described nine suspected cases of accidental *Atropa belladonna* L. intoxication that almost all of them had one or more sign(s) and symptom(s) of anticholinergic toxidrome. One of their patients, who had multiple sclerosis, had developed acute subdural hematoma (ASDH) that the authors believed that to be due to the intoxication, as it is clear from their article title and 'Discussion'. After the description of his brain surgery, the authors have explained about the clinical manifestations of *A. belladonna* L. poisoning and anticholinergic toxidrome and nothing about the cause(s) of development of ASDH in their concerned case. Interestingly, they have only stated that the reason of ASDH was unclear, while acute tachycardia and hypertension arising in such patients might have given the way.[1] The main question is that whether acute tachycardia and hypertension in the setting of anticholinergic toxidrome can cause ASDH. If it is true, then the ASDH cannot be a rare event.

As you know, ASDH usually follows head trauma, most frequently from the tearing of bridging veins between the cerebral cortex and the draining sinuses. Also, skull fracture may or may not be present.[2] However, rarely, ASDH may occur spontaneously in the absence of head trauma. Only approximately 100 cases of nontraumatic ASDH have been described in the literature in sporadic case reports. These limited cases often have an arterial source. There are a number of possible causes or risk factors that may lead to nontraumatic ASDH, which include ruptured cortical artery, ruptured intracranial aneurysm, hypertensive cerebral hemorrhage, neoplasm, hematologic disorders, anticoagulant and thrombolytic therapy, cerebral amyloid angiopathy, dural arteriovenous fistulas, cocaine abuse, and acquired immune deficiency syndrome.[3,4] Therefore, it seems that ASDH in the authors' case is not due to the acute tachycardia and hypertension. The major concern in this regard is that if ASDH cannot be explained by the authors' suggestions, why has it developed? Anticholinergics such as *A. belladonna* L., besides other signs and symptoms, as the authors have themselves mentioned, may produce agitation in association with coma and seizure.[5,6] In these situations, it is very likely that the patient has suffered a head trauma. Thus, I think that the most possible explanation for the development of ASDH in this patient is head trauma that has been missed and not the acute tachycardia and hypertension, per se.

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Declaration of Conflict Interest

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