

The importance of physical examination findings and the use of physostigmine

Abdussamed Vural

Emergency Clinic of Kars Harakani State Hospital, Kars, Turkey.

E-mail: abdussamedvural@gmail.com

To the Editor,

I read with interest the case report by Özkaya et al.¹ in the first issue of the The Turkish Journal of Pediatrics 2015 publications regarding Datura stramonium poisoning. I thank the authors for this case report but I want to express some aspects of this case concerning the diagnosis and treatment. Although the patient history is very important in the diagnosis and treatment of the case, the patients medical history may be insufficient because of some of the following reasons: babies or children are not able to fully express themselves, the patient maybe elderly or the relatives of patients maybe indifferent and careless or it could be a physician-induced cause. In this respect, both the patient history and the treatment are expected to be detailed in light of the findings of the physical examination. Upon presentation to the emergency department, the patient was found to be tachycardic and confused with dilated pupils and dry, flushed, hot skin. The physical examination findings described in this case appear to primarily occur after exposure to anticholinergic agents. Therefore, the findings of anticholinergic toxidrome should be well known. The sudden onset hallucinative consciousness changes (GCS:12), fever, dry skin, tachycardiac, mydriasis, vision abnormalities, slurred speech and ataxia may not only show that there is a serious anticholinergic poisoning in the 5-year-old previously completely healthy child but also may indicate the use of physostigmine to narrow the differential diagnosis or to provide diagnosis and treatment. The use of physostigmine can help in both the diagnosis and management of patients intoxicated with these substances²⁻⁴.

REFERENCES

1. Özkaya AK, Güler E, Karbel N, Namlı AR, Göksüğü Y. Datura stramonium poisoning in a child. Turk J Pediatr 2015; 57: 82-84.
2. Glatstein MM, Alabdulrazzaq F, Garcia-Bournissen F, Scolnik D. Use of physostigmine for hallucinogenic plant poisoning in a teenager: case report and review of the literature. Am J Ther 2012; 19: 384-388.
3. Burns MJ, Linden CH, Graudins A, Brown RM, Fletcher KE. A comparison of physostigmine and benzodiazepines for the treatment of anticholinergic poisoning. Ann Emerg Med 2000; 35: 374-381.
4. Rosembaum C, Bird SB. Timing and frequency of physostigmine redosing for antimuscarinic toxicity. J Med Toxicol 2010; 6: 386-392.

Reply

Ahmet Kağan Özkaya¹, Ekrem Güler², Nihal Karabel³, Ali Rıza Namlı³, Yalçın Göksüğü³

¹Department of Pediatrics, Karadeniz Technical University Faculty of Medicine, Trabzon, Turkey, ²Pediatric Emergency Division, Gazi University Faculty of Medicine, Ankara, Turkey, ³Department of Pediatrics, Sütçü İmam University Faculty of Medicine, Kahramanmaraş, Turkey.

E-mail: kaganozkaya@hotmail.com or kaganozkaya@yahoo.com

To the Editor,

We thank Dr. A. Vural for his valuable opinions on the case report. As he pointed out, the medical history of the patient is very important for the diagnosis and management of the patient. In fact, one of the motives that compelled us to present this case was to emphasize the need for obtaining an accurate, full and correct medical history of the patient. The clinician should always bear this in mind and at the same time be able to diagnose toxidromes. We emphasized this issue in the case report¹.

Physostigmine is an anticholinesterase inhibitor that can be used both in the diagnosis and treatment of anticholinergic toxidromes in adults. However, it should be used only in cases of life-threatening toxicity in children². Moreover, physostigmine may cause cholinergic crisis and severe dysrhythmia^{2,3}. In the case presented, the patient was hemodynamically stable and no severe central anticholinergic symptoms were developed, despite the presence of hallucinations and affected consciousness. Although in some reports in the literature the use of physostigmine has been considered as acceptable for children, there are others mentioning that benzodiazepine is also used for delirium^{3,4}. Moreover, anticholinergic signs and symptoms can be also seen in tricyclic antidepressant overdose and the physostigmine should be used with caution in any patient with cyclic antidepressant overdose or co-ingestions⁵. Another issue is that some antidotes, such as physostigmine, may not always be available in hospitals in Turkey and physostigmine can not be obtained directly. Physostigmine is provided by the Turkish Ministry of Health, in emergency conditions⁶. For all the reasons stated above, if anticholinergic toxidrome had been diagnosed initially in this case and its cause could have been known, we would be more insistent in providing and using physostigmine.

REFERENCES

1. Özkaya AK, Güler E, Karabel N, Namlı AR, Göksüğü Y. Datura stramonium poisoning in a child. *Turk J Pediatr* 2015; 57: 82-84.
2. Krenzelok EP. Aspects of Datura poisoning and treatment. *Clin Toxicol (Phila)* 2010; 48: 104-110.
3. Glatstein MM, Alabdulrazzaq F, Garcia-Bournissen F, Scolnik D. Use of physostigmine or hallucinogenic plant poisoning in a teenager: case report and review of the literature. *Am J Ther* 2012; 19: 384-388.
4. Amini M, Khosrojerdi H, Afshari R. Acute Datura Stramonium poisoning in East of Iran - a case series. *Avicenna J Phytomed* 2012; 2: 86-89.
5. Frascogna N. Physostigmine: is there a role for this antidote in pediatric poisonings? *Curr Opin Pediatr* 2007; 19: 201-205.
6. Derinoz O, Emeksiz HC. Use of physostigmine for cyclopentolate overdose in an infant. *Pediatrics* 2012; 130: e703-e705.