

## Conversion disorder: A mysterious event following general anesthesia

Conversion disorder (CD) is rare and defined as a somatoform disorder involving an unconscious, involuntary process described as neurological symptoms that are not consistently explained by neurological or medical conditions.<sup>[1]</sup> Various triggers including anesthesia and surgery as well as psychologic stresses may result in the sudden clinical manifestations of the disorder in patients with no previous psychological disorders.<sup>[2]</sup> In this issue of SJA, we describe a case of CD upon emergence from general anesthesia. The patient recovered well in the OR and transferred to the PACU fully awake. Half an hour he became unconscious and not responding to verbal commands. In the meantime, he was able to control his airway reflexes but unable to move all four limbs. One important sign we have noticed, upon attempting of opening his eyes, he was resisting our attempt. There were no hemodynamic changes and his heart rate and blood pressure remained stable. Delayed recovery after general anesthesia is not uncommon, and the differential diagnosis which we excluded, includes relative overdose of anesthetics or opioids, hypothermia, hypoglycemia, hypoxia, hypercarbia, hypocarbia, altered hydration, electrolyte or acid-base status, hepatic and renal failure. Initially we sought of central anticholinergic syndrome (CAS) since the patient received general inhalation anesthesia with sevoflurane.<sup>[3]</sup> We looked for physostigmine but was unavailable. We consulted neurologist and intensivist. We transferred the patient to the high dependency unit and CT scan and MRI to the brain and cervical spine done urgent. Both showed normal scan with no evidence of any pathology to explain the patient condition. We started anticonvulsant thinking that this was a case of seizure like activity which was discontinued later after doing EEG which was normal. Toxicological screening was normal. Eight hours after being discharged from the PACU, he showed spontaneous recovery of consciousness. On the first postoperative day he was fully conscious and oriented but had tetraplegia. On the subsequent days, he recovered all four limbs sensory and motor. On the fifth postoperative day, he was discharged home with neurological appointment. Four weeks later he attended the clinic and nerve conduction study was done and was normal.<sup>[4]</sup>

In the literatures, there are many terminologies describing CD. Functional coma,<sup>[5]</sup> functional tetraplegia,<sup>[6]</sup> conversion

phenomenon,<sup>[7]</sup> hysterical spinal paralysis,<sup>[8]</sup> functional neurological symptom disorder (FNSD),<sup>[9]</sup> and hysterical paraplegia.<sup>[10]</sup>

The development of CD during the postoperative period presents challenges to the anesthesiologist. Attention and multidisciplinary approach are required for proper diagnosis and management of such cases. Many of the signs and symptoms are vague but one important pathognomonic sign for diagnosis of CD postoperatively is the resistance to eye opening. CD should be considered in the differential diagnosis of any altered conscious level in the postoperative following general anesthesia. However, the diagnosis remains by exclusion which mandates meticulous physical examination, laboratory and radiological investigations to rule out any pathological diseases. Early intervention and multidisciplinary approach are essential in such cases for favorable outcome.

### ABDELAZEEM A. ELDAWLATLY

College of Medicine, King Saud University, Riyadh,  
Kingdom of Saudi Arabia

### Address for correspondence:

Prof. Abdelazeem A. Eldawlatly,  
Professor, Department of Anesthesia, College of Medicine, King  
Saud University Medical City, Riyadh, Kingdom of Saudi Arabia.  
E-mail: dawlatly2@yahoo.com

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### References

1. Hakima M, Klingeleb K, Tumina D, Tobias JD, Bhallaa T. Diagnosis and management of postoperative conversion disorder in an adolescent following arthroscopic meniscectomy. *J Med Cases* 2017;8:326-9.
2. Ito A, Nakamoto T, Ohira S, Kamibayashi T. Postoperative tetraplegia due to conversion disorder upon emergence from general anesthesia. *JA Clin Rep* 2020;6:88.
3. Schneck HJ, Ruprecht J. Central anticholinergic syndrome in anesthesia and intensive care. *Acta Anaesthesiol Belg* 1989;40:219-28.
4. Alshathri NA, Binsaleh S, Al Saadon A, Alkhwajah NM, Eldawlatly A. Conversion disorder upon emergence from general anesthesia—A case report and review of literature. *Saudi J Anaesth* 2021;15:441-3.
5. Ryznar E, Wilcox D. Functional coma: Two case reports and a review of the literature. *Psychosomatics* 2019;60:343-51.
6. Scheitler KM, Robin CR, Wijdicks EFM. Charcot in the ICU: Functional

- tetraplegia after surgery. *Pract Neurol* 2020;20:476-8.
7. Orr II DL, Glassman AS. Conversion phenomenon following general anesthesia. *J Oral Maxillofac Surg* 1985;43:819-21.
  8. Apple DF. Hysterical spinal paralysis. *Paraplegia* 1989;27:428-31.
  9. D'Souza RS, Vogt MNP, Rho EH. Post-operative functional neurological symptom disorder after anesthesia. *Bosn J Basic Med Sci* 2020;20:381-8.
  10. Baker JHE, Silver JR. Hysterical paraplegia. *J Neurol Neurosurg Psych* 1987;50:375-82.

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