



REVISTA BRASILEIRA DE ANESTESIOLOGIA

Publicação Oficial da Sociedade Brasileira de Anestesiologia
www.sba.com.br



CLINICAL INFORMATION

When a patient falls (asleep) and can't get up: conversion disorder – paraplegia following general anesthesia[☆]



Chawla LaToya Mason

Baylor College of Medicine, Department of Anesthesiology, Houston, USA

Received 4 September 2014; accepted 28 October 2014

Available online 9 June 2015

KEYWORDS

General anesthesia;
Paraplegia;
Psychiatry;
Conversion disorder

Abstract

Background and objectives: This case report describes the rare occurrence of paraplegia caused by conversion disorder in a woman who received general anesthesia for breast surgery.

Case report: A 46-year-old healthy woman received general anesthesia for excision of a left breast fibroepithelial lesion. In the post-anesthesia care unit, she reported bilateral loss of both sensation and motor function below the knees. Physical signs and symptoms did not correlate with any anatomical or neurological patterns; imaging revealed no abnormalities. Psychiatric consultation was performed wherein familial stressor circumstances were identified, leading to diagnosis and management of conversion disorder.

Conclusion: Conversion disorder is characterized by alteration of physical function due to expression of an underlying psychological ailment. Its diagnosis requires thorough evaluation including appropriate workup to exclude organic causes. The meshing together of anesthesiology and psychiatry – as demonstrated by this case report – offers an opportunity to highlight important information pertaining to the definition, diagnosis, and management of conversion disorder as it may be encountered in the postanesthesia recovery period.

© 2015 Sociedade Brasileira de Anestesiologia. Published by Elsevier Editora Ltda. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

PALAVRAS-CHAVE

Anestesia geral;
Paraplegia;
Psiquiatria;
Transtorno conversivo

Quando um paciente cai (no sono) e não consegue acordar: transtorno conversivo – paraplegia após anestesia geral

Resumo

Justificativa e objetivos: Descrever a rara ocorrência de paraplegia causada por distúrbio conversivo em uma mulher que recebeu anestesia geral para a cirurgia de mama.

[☆] Institution: Department of Anesthesiology, Baylor College of Medicine, Houston, TX, USA.

E-mail: cmason@bcm.edu

Relato de caso: Mulher saudável de 46 anos recebeu anestesia geral para excisão de uma lesão fibroepitelial na mama esquerda. Na sala de recuperação pós-anestésica, a paciente relatou perda bilateral de sensibilidade e motricidade abaixo dos joelhos. Os sinais físicos e sintomas não correlacionavam com nenhuma padrão anatômico ou neurológico; exame de imagem não revelou anormalidades. Uma consulta psiquiátrica foi feita e constatou circunstâncias familiares estressantes, o que levou ao diagnóstico e tratamento de transtorno conversivo.

Conclusão: O transtorno conversivo é caracterizado por alteração da função física devido à expressão de uma doença psicológica subjacente. Seu diagnóstico requer uma avaliação minuciosa, incluindo tratamento adequado para excluir causas orgânicas. O entrosamento de anestesiologia e psiquiatria, como demonstrado neste relato de caso, oferece uma oportunidade para destacar as informações importantes relativas à definição, diagnóstico e manejo do transtorno conversivo, pois esse transtorno pode ser encontrado no período de recuperação pós-anestésica.

© 2015 Sociedade Brasileira de Anestesiologia. Publicado por Elsevier Editora Ltda. Este é um artigo Open Access sob uma licença CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Conversion disorder, previously known as hysteria and now often referred to as functional neurological symptom disorder, is representative of an unconscious, involuntary process in which psychosocial needs, conflicts, or stressors are expressed as somatic symptoms for which there is no conforming anatomic or physiologic explanation.¹ Among the general United States population, its incidence has been reported to be between 11 and 300 per 100,000 people or 0.01–0.5% and appears to affect females more than males at a ratio of 2:1.^{1–3} Greater prevalence has been reported in other populations: 5–14% among general hospital patients, 1–3% among outpatient referrals to psychiatrists, and 5–25% among psychiatric outpatients.⁴ The prevalence of conversion disorder in the perioperative setting – specifically after administration of general anesthesia – is unknown. The meshing together of anesthesiology and psychiatry – as demonstrated by this case – offers an opportunity to highlight important information pertaining to the definition, diagnosis, and management of conversion disorder as it may be encountered in the postanesthesia recovery period.

Case report

A 46-year-old 74 kg woman presented to an ambulatory surgery unit for excision of a left breast fibroepithelial lesion. Her medical history included laparoscopic cholecystectomy and right breast surgery; both procedures had been performed under general anesthesia without adverse event. After performing preanesthetic assessment and acquiring informed consent, midazolam (2 mg) was administered for anxiolysis. In the operating suite, an uneventful anesthetic induction ensued with fentanyl (100 mcg), lidocaine (70 mg), and propofol (150 mg). General anesthesia via a laryngeal mask airway (LMA) was maintained using sevoflurane in a 50/50 air/oxygen mixture for the uneventful 46-min procedure. Other intravenous medications administered

intraoperatively were cefazolin (1000 mg), acetaminophen (1000 mg), and ondansetron (4 mg). At the procedure's end, the LMA was removed and the patient was transferred to the postanesthesia care unit. Approximately half an hour later, she reported absence of motor control and sensation affecting both lower extremities below the knees. Vital signs had remained within normal limits. Neurosurgery and neurology teams were immediately consulted for further evaluation which included neurological physical examination and *stat* computed tomography (CT) of the head as there was concern that the patient experienced a cerebrovascular insult that would require emergent therapy. Upon confirmation of negative CT imaging and in the absence of any apparent organic explanation for the patient's neurological symptoms, psychiatric consultation was obtained. Interview of the patient revealed the presence of significant familial and social stressors in her life (including recent conflict with her spouse), leading to a presumptive diagnosis of conversion disorder. Subsequent management included psychotherapy, physical therapy, and education regarding coping strategies. The patient was discharged home three days later at which time she required a walker for ambulation assistance. The patient was lost to follow-up until she presented several months later for an unrelated family medicine visit. At that time, she demonstrated no neurological deficits or physical limitations.

Discussion

Conversion disorder, categorized as a somatoform illness, is characterized by the presence of one or more symptoms or deficits that affect voluntary motor or sensory function, suggestive of a neurological or other general medical condition, but with distinct presentations and findings that help differentiate it from an organic disease.¹ Although the disorder may vary in severity, duration, and presentation, symptoms of the disorder usually manifest as one of the following four feature types: motor symptoms or deficits, sensory

symptoms or deficits, pseudo seizures, or mixed presentation. The disorder is usually triggered by a recent significant stress or emotional trauma. Other risk factors for conversion disorder include a history of physical or sexual abuse and neglect in childhood, personal or familial history of a mental health condition, or history of a neurological disease that causes similar symptoms.⁴

On many levels, conversion disorder implicates the role of the unconscious in the pathophysiology of a particular condition. Its diagnosis is often challenging to make and mandates definitive determination that symptoms or deficits are not being intentionally produced. This key factor differentiates conversion disorder from malingering or other factitious disorders. When considering the diagnosis of conversion disorder, it is essential to carefully eliminate any possible anatomic, physiologic, or pathologic explanations for the symptomatology. Conversion disorders may mimic a variety of neurological and musculoskeletal conditions including but not limited to cerebrovascular accident, spinal cord injury, myasthenia gravis, Guillian-Barre' syndrome, Parkinson's disease, epilepsy, or multiple sclerosis.

In the literature, few reports describe the occurrence of conversion disorder in association with anesthetic techniques. Three reports describe its development in pediatric patients after general anesthesia.^{3,5,6} Han et al.⁷ describe the postoperative development of conversion locked-in syndrome in a woman who received general anesthesia for implantation of a spinal cord stimulator. At least three other isolated cases report the occurrence of conversion disorder after neuraxial techniques (2 spinals, 1 epidural).⁸⁻¹⁰ The patient discussed in this report experienced profound neurological and motor deficits during recovery from an uneventful general anesthetic technique and operative procedure that could not be explained by any abnormalities found on physical examination and workup.

Effective management of conversion disorder requires a multidisciplinary approach. Timely referral to psychiatric services is an essential component as well as psychotherapy, physical therapy, and addressing the related stress. It is paramount that care providers be cognizant of the patient's current life events, past stress responses, and present support systems. Pharmacological therapy is not a mainstay of treatment regimens and, in fact, should be

avoided whenever possible due to concern for development of substance dependency.² Appropriate pharmacologic agents may be considered in select patients with extreme anxiety. There is some data that suggests an impactful role for the utilization of transcranial magnetic stimulation in the management of this disorder.¹¹ Above all, management of conversion disorder should comprise of honest disclosure, reassurance of recovery, and reinforcement of alternative coping strategies.³

Conflicts of interest

The author declares no conflicts of interest.

References

1. American Psychiatric Association. Conversion disorder. In: *Diagnostic and Statistical Manual of Mental Disorders DSM-4*. 4th ed. Washington, DC: American Psychiatric Association; 2000.
2. Haque R, Alavi Z. Mr. Smith is falling every day: conversion disorder in an elderly man. *Ann Long-Term Care Clin Care Aging*. 2012;20:30-5.
3. Judge A, Spelman F. Postoperative conversion disorder in a pediatric patient. *Pediatr Anesth*. 2010;20:1052-4.
4. Feinstein A. Conversion disorder: advances in our understanding. *CMAJ*. 2011;183:915.
5. Haden RA. Conversion reaction following anaesthesia. *Anaesthesia*. 2004;59:728-9.
6. Reilly MJ, Milmo G, Pena M. Three extraordinary complications of adenotonsillectomy. *Int J Pediatr Otorhinolaryngol*. 2006;70:941-6.
7. Han D, Connelly NR, Weintraub A, et al. Conversion locked-in syndrome after implantation of a spinal cord stimulator. *Anesth Analg*. 2007;104:163-5.
8. Yokoyama K, Okutsu Y, Fujita H. A case of monoplegia from conversion disorder after spinal anesthesia. *Masui*. 2002;51:1363-7.
9. Sugimoto Y, Makino S, Doi Y, et al. A case of conversion disorder (hysteria) after spinal anesthesia. *Masui*. 2009;58:209-11.
10. Kwok-On N, Jia-Fu L, Mui W. Aphonia induced by conversion disorder during a Cesarean section. *Acta Anaesthesiol Taiwan*. 2012;50:138-41.
11. Schonfeldt-Lecuona C, Connemann BJ, Viviani R, et al. Transcranial magnetic stimulation in motor conversion disorder: a short-case series. *J Clin Neurophysiol*. 2006;23:472-5.