

A Case of Hysterical Paralysis/Conversion Disorder with Triplegia After General Anesthesia

Genel Anestezi Sonrası Tripleji ile Seyreden Histerik Paralizi/Konversiyon Bozukluğu Olgusu

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Abstract

Conversion disorder manifests as physical symptoms arising from an underlying psychological condition. Classified as a somatoform disorder, it is relatively rare. Common triggers include significant stress, emotional trauma, childhood physical or sexual abuse and neglect, a personal or family history of mental health disorders, or a history of neurological disease with similar symptoms. The disorder is diagnosed when unexplained physical/neurological symptoms -such as paradoxical paralysis, seizures, pain, or sensory deficits involve one or more muscle and sensory systems. These symptoms are interpreted as unconscious adaptations to difficult situations. Various psychological stressors, such as anesthesia and surgery, can cause sudden clinical manifestations of conversion disorder even in patients with no previous psychological diagnoses. In the postoperative period, conversion disorder should be considered in the differential diagnosis of unexplained neurologic symptoms while meticulously excluding organic causes. However, the surgery itself and the experience of anesthesia can also be sources of stress and trauma, contributing to the development of postoperative conversion disorder symptoms. When conversion disorder is suspected, psychiatric consultation should be sought, and treatment should be initiated as soon as possible. Early intervention and a multidisciplinary approach are essential for achieving a positive outcome in such cases.

Keywords: Conversion Disorder, General Anesthesia, Paralysis

Öz

Konversiyon bozukluğu, altta yatan psikolojik bir bozukluğun fiziksel semptomlarla ifade edilmesidir. Somatoform bir hastalık olarak tanımlanır ve nadir görülür. Tetikleyici faktörler arasında yakın zamanda yaşanan önemli stres veya duygusal travma, çocuklukta fiziksel veya cinsel istismar ve ihmal, kişisel veya ailesel ruh sağlığı bozukluğu öyküsü veya benzer semptomlara neden olan nörolojik hastalık öyküsü yer alır. Konversiyon bozukluğu, bir veya daha fazla kas ve duyu sistemini içeren paradoksal felç, nöbetler, ağrı ve/veya duysal noksanlıklar gibi açıklanamayan fiziksel ve/veya nörolojik semptomlar olduğunda teşhis edilir. Zor durumlara adaptasyon durumlarında bilişimsel kaynaklanan semptomlar olarak yorumlanmaktadır. Anestezi ve ameliyat gibi çeşitli tetikleyiciler ve psikolojik stresler, daha önce psikolojik bozukluğu olmayan hastalarda konversiyon bozukluğun ani klinik belirtilerine neden olabilir. Ameliyat sonrası dönemde açıklanamayan nörolojik semptomları olan hastalarda konversiyon bozukluğu ayırıcı tanıda düşünülmeli ve organik nedenler titizlikle dışlanmalıdır. Bununla birlikte, ameliyatın kendisi ve anestezi deneyimi de bir stres ve travma kaynağı olabilir ve ameliyat sonrası konversiyon bozukluğu semptomlarının gelişiminde rol oynayabilir. Semptomlar konversiyon bozukluğuna bağlı olduğu düşünüldüğünde, psikiyatristlere danışılmalı ve tedaviler mümkün olan en kısa sürede başlatılmalıdır. Bu tür vakalarda olumlu sonuç için erken müdahale ve multidisipliner yaklaşım şarttır.

Anahtar Kelimeler: Humerus, Processus supracondylaris, Foramen supratrochlearis, Morfometrik, Varyasyon

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Introduction

Hysterical paralysis is a form of conversion disorder. When a patient presents with paralysis, the diagnosis must be confirmed through imaging and electrophysiological to rule out organic causes. Postoperative conversion disorder can affect motor and/or sensory functions and, in some cases, cause temporary loss of consciousness. It is diagnosed by excluding neurological, metabolic, or iatrogenic causes occurring after surgery.

Conversion disorder is reported to have a higher prevalence rate of 5-14% among general hospital patients, compared to 1-3% among psychiatric outpatients, and 5-25% among psychiatric inpatients (1). However, these rates are not specific to the perioperative period, and a direct association with anesthesia or surgery has not been established. There are limited reports addressing cases of conversion disorder associated with anesthesia techniques. These include cases of conversion disorder in pediatric patients after general anesthesia and in adults after spinal anesthesia or epidural anesthesia (2, 3-8).

This case highlights the importance of considering conversion disorder in the differential diagnosis of postoperative neurological symptoms to ensure early diagnosis and appropriate management. To our knowledge, this is the first reported case of conversion disorder manifesting as triplegia after general anesthesia.

Case

A 28-year-old, 48 kg female patient underwent anesthesia premedication for lithotripsy to treat a left renal mid-pole localized stone. She had no significant systemic and neurologic disease preoperatively, and no psychiatric evaluation was performed before surgery.

Following the procedure under general anesthesia, the patient complained that she could not feel or move both legs and her left arm upon waking. Before the surgical procedure, midazolam was administered intravenously at a dose of 0.02 mg/kg as premedication. Anesthesia was induced with a slow intravenous infusion of propofol at a dose of 2 mg/kg after adequate monitoring. For maintenance, sevoflurane was delivered continuously at a concentration of 1.0-2.0% via inhalation following intubation.

During the procedure, the patient was positioned in the standard lithotomy position. A 9.5 Fr semi-rigid renoscope was used for initial access. A DJ stent, which had been placed one month earlier for pretesting purposes, was visualized in the bladder and removed using foreign body forceps. A sensor guidewire was advanced under fluoroscopic guidance through the left ureteral orifice into the left kidney, followed by the insertion of the 9.5 Fr renoscope into the distal ureter. A safety guidewire was also placed under fluoroscopic control. No access sheath was utilized.

A 1.5 cm stone in the mid-pole of the left kidney was fragmented using laser lithotripsy. No additional stones were detected. Subsequently, a 4.7 Fr DJ stent (28 cm) was pla

ced using the Seldinger technique under fluoroscopic guidance, and a 16 Fr Foley catheter was inserted. The operation lasted 45 minutes. During the procedure, an isotonic saline solution (0.9% NaCl) was used as the irrigation fluid. A 30-watt holmium: YAG (Ho:YAG) laser device (MegaPulse 30+) was employed, delivering energy via a 272-micron laser fiber. For flexible ureterorenoscopy, a single-use digital flexible ureterorenoscope was preferred. As prophylactic antibiotic therapy, 1 g of ceftriaxone was administered intravenously.

Upon emergence from anesthesia, the patient was fully awake but unable to move her left arm and both legs and was unresponsive to painful stimuli. Reflexes were normal in all four extremities, with no hyperreflexia or hypotonia. Routine blood biochemistry, hemogram, electrolytes, renal function, and thyroid function tests were all within normal limits. Brain MRI, diffusion MRI, and spinal cord MRI were unremarkable. Nerve conduction studies demonstrated normal motor and sensory nerve conduction velocities, combined muscle action potentials, and bilateral tibial and left ulnar/median F responses. Needle EMG of both legs, thighs (L2-S1), and left upper extremity (C5-T1) was also unremarkable. Bilateral tibial and median SEP responses were within normal limits. Given the normal white blood cell count, absence of fever, and isolated neurological findings, cerebrospinal fluid testing was not performed.

Neurophysiological and radiological examinations ruled out stroke, hemorrhage, mass lesions, or other structural causes of paresis. On the second day of hospitalization, the patient started to move her right leg and was able to walk while dragging her left leg. However, her left arm remained immobile. On the third day of admission, a psychiatrist was consulted to investigate potential psychosomatic causes. The psychiatrist diagnosed the patient with postoperative conversion disorder. Instead of medical treatment, rehabilitation with physical therapy, supportive care, and psychotherapy were implemented. The patient was discharged after one week without any residual neurological deficits.

Discussion

Conversion disorder is classified as a type of somatoform disorder in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) (9). It presents with symptoms such as paradoxical paralysis, seizures, sensory deficits, and pain that cannot be explained by typical neuroanatomical and physiological mechanisms (9, 10).

A review of the literature shows that the relationship between anesthesia type and the development of conversion disorder remains unclear, with ongoing uncertainty about whether anesthesia plays a protective or causal role. Some researchers suggest that surgical stress or trauma may be a triggering factor for functional neurologic symptoms. It is also noteworthy that this disorder develops under propofol sedation. Stone et al. even suggested propofol sedation as a therapeutic option for severe symptoms of

conversion disorder (11). In addition, a previous case of postoperative conversion disorder after moderate-to-deep sedation with propofol has been documented (12). This case is important in demonstrating that conversion disorder can occur independently of general or central neuraxial anesthesia. Although the impact of anesthesia on conversion disorder remains unclear, further research will help us better understand its role and develop more effective prevention and treatment strategies.

Regardless of the type of anesthesia administered, conversion disorder should be considered in the postoperative period. The patient should be approached with a multidisciplinary strategy, taking into account their psychosocial status in addition to a detailed neurological and metabolic evaluation. Diagnosis requires a detailed psychiatric interview, assessment of psychosocial stressors, and differentiation from other psychiatric disorders such as somatic symptom disorder, anxiety disorders, or depression.

A detailed preoperative evaluation of the patient's mood, anxiety levels, trauma history, and stress factors may help identify patients at risk. In our case, no preoperative psychiatric evaluation was performed.

When symptoms do not follow typical neuroanatomical and physical patterns, conversion disorder should be considered after ruling out organic causes. Early psychiatric consultation and appropriate treatment -including psychotherapy and supportive care- are crucial in preventing prolonged hospital stays and improving patient outcomes.

Conclusion

Our case shows that conversion disorder should be considered in patients exhibiting unexplained physical and/or neurological symptoms after all other potential causes have been ruled out, particularly in cases requiring urgent intervention. When symptoms are suspected to stem from conversion disorder, it is essential to consult psychiatrists and initiate treatments promptly to facilitate patient rehabilitation.

Ethical Approval: An 'Informed Consent Form' was obtained from the patient. The identity of the patient was kept confidential.

Author Contributions:

Concept: A.E.

Literature Review: A.E.

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Data acquisition: A.E, M.Y.

Analysis and interpretation: A.E.

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Critical revision of manuscript: A.E.

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