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Case report

Epidural anesthesia for posterior spinal fusion and lumbar surgery in a patient with glanzmann's thrombasthenia – Case report and systematic review[☆]



Sergio Hernando Cabarique-Serrano^{a,b,c,d}, Víctor Hugo González-Cárdenas^{b,d,e,*},
Jean Pierre Dussán-Crosby^b, Rodolfo Enrique Páez-González^{b,f},
María Alejandra Ramírez^b

^a Anesthesiologist Intensivist, Department of Anesthesiology, Hospital Infantil Universitario de San José. Bogotá D. C., Colombia

^b School of Medicine, Fundación Universitaria de Ciencias de la Salud (FUCS). Bogotá D. C., Colombia

^c Intensive Care Unit, Clínica Universidad de La Sabana. Chía, Colombia

^d School of Medicine, Universidad de La Sabana. Chía, Colombia

^e Anesthesiologist, Clinical Epidemiologist and Master in Anesthesia and Regional Analgesia. Leading Coordinator Grupo Deorum Opus-Hospital Infantil Universitario de San José/ Hospital de San José / Fundación Universitaria de Ciencias de la Salud (FUCS). Bogotá D. C., Colombia

^f Orthopedist, Subspecialist in Spinal Surgery. Hospital Infantil Universitario de San José. Bogotá D. C., Colombia

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ABSTRACT

Introduction: Lumbar spine arthrodesis under regional epidural anesthesia provides adequate hemodynamic stability and timely treatment of acute postoperative pain to patients undergoing the procedure. However, the presence of intimidating comorbidities limits its widespread practice.

Objetives: To describe the use of epidural anesthesia for spinal fusion in a patient with Glanzmann's Thrombasthenia and high anesthetic risk of cardiovascular complications.

Methodology: Case reports and clinical discussion based on a systematic search of the medical literature.

Results: Upon selecting the strategies for a literature search on various databases, some articles were selected from Pubmed, LILACS, and sciencedirect. The articles were screened based on title and abstract and 19 full text articles were analyzed and submitted for discussion of an appointed panel of experts (Anesthesiology Group) for inclusion herein.

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* Corresponding author at: Cra. 52 No. 67A-71, Oficina de Anestesiología, Hospital Infantil Universitario de San José, Bogotá, Colombia.
E-mail address: vhgonzalez@fucsalud.edu.co (V.H. González-Cárdenas).

Conclusion: The use of epidural anesthesia in spinal surgery of a patient with significant hematological and cardiovascular complications was a successful approach and represents one further step forward in the implementation of protocols and robust clinical trials for the management of complex patients like the one herein described.

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Anestesia epidural para artrodesis e instrumentación de columna lumbar por vía posterior en paciente con tromboastenia de glanzmann – informe de caso y revisión sistemática

R E S U M E N

Palabras clave:

Anestesia epidural
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Introducción: La artrodesis de columna lumbar, bajo anestesia regional epidural, permite a los pacientes programados para éste tipo de procedimiento mantener una adecuada estabilidad hemodinámica y ser tratados oportunamente de su dolor postoperatorio agudo. Sin embargo, la presencia de intimidantes comorbilidades limita su práctica de forma generalizada.

Objetivos: Describir la utilización de anestesia epidural para artrodesis lumbar en un paciente con Tromboastenia de Glanzmann y alto riesgo anestésico de complicaciones de predominio cardiovascular.

Metodología: Reporte de Casos y discusión clínica basada en búsqueda sistemática de la literatura médica.

Resultados: Tras la selección de estrategias para la búsqueda de la literatura en diferentes bases de datos, se obtuvieron artículos de Pubmed, LILACS y sciencedirect. Posterior a exclusión por título y resumen, analizamos 19 artículos en texto completo, los cuales fueron sometidos a sesiones de discusión por parte de un panel de expertos designado (Grupo de Anestesiología), y fueron incluidos en esta revisión.

Conclusión: Para este caso, el uso de la anestesia epidural en cirugía de columna, en un paciente con importantes comorbilidades hematológicas y cardiovasculares, fue una medida exitosa, y representa un paso más en la implementación de protocolos y estudios clínicos robustos para su uso en pacientes complejos como el descrito.

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Introduction

Despite the development of new technologies and therapies, the objectives of anesthesia remain unchanged. The primary goal is still based on achieving five objectives: analgesia, hypnosis, relaxation, amnesia and hemodynamic stability, keeping the patient's characteristics and the surgical requirements in mind. Throughout the years, the choice between regional and general anesthesia has been debated in various scenarios, favoring the approach that ensures maximum safety and efficacy.

Regional anesthesia (RA) may provide stability and comfort both for the patient and the medical staff, optimal surgical times, timely discharge from the Post-Anesthesia Care Unit (PACU) and improved satisfaction; these are all valid considerations for the anesthesia team when making a decision.

Though general anesthesia (GA) for the lumbar spine¹ has historically been the cornerstone for anesthesiology, various studies have questioned this approach, indicating that RA has

a lower impact on hemodynamic stability during induction and maintenance of anesthesia and is associated with a considerable decrease in the use of pain killers as a result of lower immediate postoperative pain levels²⁻⁶ and less intra and postoperative bleeding.⁴

RA has shown improved cost-effectiveness as compared to GA in lumbar spine surgery.⁵ Furthermore, there is evidence that RA is associated with lower mortality during the first 30 days after surgery, which is particularly relevant in high cardiovascular risk patients.⁷ In contrast, other trials have described similar surgical times, satisfaction, surgeon comfort and length of stay in the recovery room, with no significant differences versus GA data.^{4,5,7}

One of the big challenges the anesthetist faces in RA is in patients with prophylactic or therapeutic anticoagulation, dual anti-aggregation, and coagulopathies who are more likely to develop spinal or epidural hematoma (1 per 3000 to 150,000 patients).⁸⁻¹⁰ Increased bleeding and the need for blood products transfusion defy the decision to stop the prescribed anticoagulant medications due to the high risk of thrombosis or perioperative embolism.

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