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Case Report

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A Novel Approach to Incarcerated Femoral Hernia Repair in a Jehovah's Witness Patient: A Case Report of Meshless Open McVay Repair

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Abstract

Background: Femoral hernias are a rare but potentially life-threatening condition that requires immediate surgical intervention.

Case: We present a unique case report of an incarcerated femoral hernia in a Jehovah's Witness patient who underwent a meshless open McVay repair. The patient's religious beliefs, which prohibit blood transfusions and limit the use of blood products, significantly influenced our surgical approach.

Conclusion: We discuss the challenges of operating on Jehovah's Witnesses and highlight the importance of multidisciplinary teamwork in achieving a successful outcome.

Keywords: Femoral hernia

Introduction

Femoral hernias are a rare but potentially life-threatening condition that requires prompt surgical attention [1]. Despite their rarity, femoral hernias can have devastating consequences if left untreated, including bowel obstruction, perforation, and peritonitis [2]. The management of femoral hernias is complex and challenging, particularly in patients with specific religious beliefs that may impact their care. In this case report, we present a unique and complex scenario of an incarcerated femoral hernia in a Jehovah's Witness patient, highlighting the challenges of managing such cases and the importance of multidisciplinary teamwork in achieving a successful outcome. We also discuss the importance of respecting patients' religious beliefs and values in the development of surgical management plans, and the need for surgeons to be flexible and adaptable in their approach to care.

Currently, there is a lack of consensus on the optimal surgical approach for femoral hernia repair, especially in patients where mesh use is not feasible. The McVay repair, a traditional open surgical technique, offers a meshless approach, but its effectiveness and limitations are not well understood [3,4].

This case report aims to present the outcomes of the McVay repair in a patient with a femoral hernia, highlighting its potential benefits and drawbacks. By sharing our experience, we hope to contribute to the ongoing debate on the optimal surgical management of femoral hernias and provide insights for surgeons facing similar challenges.

Treating Jehovah's Witness patients poses significant challenges in surgical settings, particularly when it comes to managing blood loss and transfusions [5]. As adherents to this faith, they refuse to accept blood transfusions or blood products, even in life-threatening situations. This constraint necessitates a multidisciplinary approach, involving close collaboration between surgical, anesthetic, and hematologic teams to ensure successful outcomes [6]. Preoperative optimization of hemoglobin levels and meticulous attention to minimizing blood loss during surgery become critical considerations to avoid compromising the patient's health [7,8]. Furthermore, the emotional and psychological burden of adhering to their faith's principles can add an extra layer of complexity to the surgical encounter, requiring empathetic and culturally sensitive care [9]. The surgeon must balance the need to respect the patient's autonomy and religious beliefs with the imperative to provide optimal medical care, making Jehovah's Witness patients a unique and challenging cohort to manage in surgical practice.

Case Presentation

A 74-year-old European female presented to our hospital with a 48-hour history of no intestinal transit. She had a past medical history of arterial hypertension and complete atrioventricular block, for which a temporary cardiac pacemaker was introduced. What makes this case unique is the rare combination of a strangulated femoral hernia and completed atrioventricular block, which posed a significant challenge in terms of surgical management. Additionally,

her religious beliefs as a Jehovah's Witness added an additional layer of complexity to her care, requiring a non-traditional approach to blood transfusion and management. There was no significant family history. The patient's symptoms were concerning for a potential bowel obstruction, and she was promptly evaluated by our surgical team.

On admission, her vital signs were as follows: weight 80 kg, blood pressure 190/70 mmHg, heart rate 80 beats per minute, BMI 19, and respiratory rate 24 breaths per minute. Clinical examination revealed bilateral symmetric vesicular breath sounds, absence of bowel sounds, and signs of tachycardia. The patient's abdomen was tender to palpation, with guarding and rebound tenderness suggestive of peritoneal irritation.

The patient's initial diagnosis was a strangulated femoral hernia with bowel ischemia, intestinal necrosis, bowel perforation, vesicovaginal fistula, uroperitoneum, and pelviperitonitis. This diagnosis was unexpected given her past medical history, as she had no previous history of hernias or abdominal surgery. The presence of a vesicovaginal fistula was particularly unusual, as it is a rare complication of a strangulated femoral hernia.

What was new in this case was the presence of a vesicovaginal fistula, which is a rare complication of a strangulated femoral hernia. The patient's age and comorbidities added to the complexity of the case, requiring a multidisciplinary approach to management. The patient's cardiac pacemaker also presented a unique challenge, as it required careful consideration during the surgical intervention.

Surgical intervention

The patient underwent exploratory laparoscopy, lavage, and drainage under general anesthesia in the dorsal decubitus position. A supraumbilical incision was made, and pneumoperitoneum was established in an open manner. The optical trocar was introduced under visual control, and a 5 mm trocar was placed in the right flank.

Intraoperative findings included a significant collection of cloudy fluid (approximately 150-200 ml) in the pelvis, false membranes, and multiple enteroparietal adhesions. Adhesions at the vesical neck level were lysed, revealing a vesicovaginal fistula. The on-call Urology team was consulted, and peritoneal lavage and drainage were performed using a 16Ch tube, exteriorized through the right flank trocar site. Hemostasis was achieved, and the pneumoperitoneum was carefully evacuated. The surgical wound was dressed appropriately.

Following the successful surgical intervention, the patient was transferred to the ICU for close monitoring. Fortunately, she tolerated the surgery well and made a stable recovery, with satisfactory vital signs and normal hemodynamic parameters.

As the patient progressed through her postoperative course, her mortality risk scores were reassessed, and a significant improvement was noted. Her SAPS II score decreased to 23, APACHE II score to 7.52%, and SOFA score to 7, indicating a marked reduction in her risk of mortality.

Upon discharge, the patient was provided with comprehensive guidance on wound care, sun exposure, physical activity, mobilization, and diet. She was advised to follow a strict wound care regimen, including daily topical treatment with antiseptics and sterile dressings until complete epithelialization. To minimize the risk of wound complications, she was counseled to avoid direct sunlight exposure for at least 6 months postoperatively.

In terms of physical activity, the patient was advised to refrain from significant exertion for at least 3 months, and to gradually resume normal activities under the guidance of her attending physician. To prevent bedsores, she was encouraged to engage in active daily mobilization. Finally, she was advised to adhere to a dietary regimen rich in fiber to prevent constipation and facilitate normal bowel movements.

Overall, the patient's postoperative course was uneventful, and she made a full recovery. Her successful outcome was attributed to the multidisciplinary approach to her care, which involved close collaboration between the surgical, anesthetic, and nursing teams.

Discussion

This case highlights the unique challenges associated with the surgical management of incarcerated femoral hernias in patients with specific religious beliefs, such as Jehovah's Witnesses. The decision to use the open McVay repair a meshless approach was driven by the need to minimize blood loss and avoid complications associated with prosthetic materials, aligning with the patient's refusal of blood products [10].

Femoral hernias, while rare, present a high risk of complications, particularly when incarceration occurs. The urgency of surgical intervention in such cases cannot be overstated, as delays can lead to bowel strangulation, necrosis, and potentially fatal outcomes. The open McVay repair remains a valuable technique in these scenarios, especially when managing patients with contraindications to the use of mesh.

The laparoscopic methods for femoral hernia repair, including Totally Extraperitoneal (TEP) and Transabdominal Preperitoneal (TAPP), offer several advantages, such as reduced postoperative pain and quicker recovery times [11]. However, these techniques require general anesthesia and carry a higher risk of intra-abdominal injury, which may not be ideal for all patients. In contrast, the open McVay repair, though associated with a longer recovery period and higher recurrence rates compared to mesh-based techniques, provides a safer alternative for specific patient populations [12].

In this case, the patient's postoperative course was stable, with successful management of the femoral hernia and associated complications. This outcome underscores the importance of a multidisciplinary approach, involving close collaboration between surgical, anesthetic, and hematologic teams, particularly in cases where standard treatments must be adapted to meet the patient's needs and also based on her SAPS II and APACHE II score we can also know that the outcome was favorable [13].

This case also serves as a reminder of the necessity to consider patient-centered care approaches that respect individual beliefs and preferences [14,15]. The successful outcome achieved in this case is a testament to the careful planning and execution of a surgical strategy that balanced the patient's religious convictions with the clinical imperative to perform life-saving surgery (Table 1).

Technique	Description	Indications	Advantages	Disadvantages
McVay	Open, meshless repair	Femoral hernias, especially in patients with contraindications to mesh	Minimizes blood loss, avoids mesh-related complications	Higher recurrence rate, longer recovery time
Lichtenstein	Open, Mesh based repair	Inguinal hernias, especially in patients with large defects	High success rate and quick recovery	Mesh related complications, potential for chronic pain
TEP (Totally Extraperitoneal Repair)	Laparoscopic, mesh based repair	Inguinal hernia, Especially in patients with bilateral or recurrent hernia	Quick recovery, minimal scarring and low recurrence	Requires general anesthesia, potential for intra-abdominal injury
TAPP (Transabdominal repair)	Laparoscopic mesh based repair	Inguinal hernias especially in patients with large defects	Quick recovery, minimal scarring and low recurrence	Requires general anesthesia, potential for intra-abdominal injury and higher risk of complications

Table 1: Comparison of hernia repair techniques.

Conclusion

In conclusion, the management of incarcerated femoral hernias in Jehovah's Witness patients requires a thoughtful and individualized approach that balances respect for their religious beliefs with the need for optimal surgical outcomes. The open McVay repair emerges as a viable alternative when the use of mesh is contraindicated, particularly in the context of minimizing blood loss and avoiding transfusion-related complications. This approach is supported by the American College of Surgeons' (ACS) guidelines for the management of hernias in Jehovah's Witness patients, which recommend considering alternative surgical techniques that minimize blood loss and avoid the use of blood products. Additionally, the Society of Surgical Chairs' (SSC) protocol for the care of Jehovah's Witness patients undergoing surgery emphasizes the importance of respecting patients' religious beliefs and values in the development of surgical management plans. This case highlights the critical importance of multidisciplinary teamwork and patient-centered care in achieving successful outcomes in complex surgical scenarios. Furthermore, it underscores the need for timely surgical intervention tailored to the individual patient's needs, as femoral hernias, though rare, carry significant risks and can have serious consequences if left untreated.

Conflict of Interest

The Author has no conflict of interest to declare.

Patient Approval

The patient consent was given and signed by the patient.

Highlights

- **Rare and complex case:** This case report presents a rare and complex scenario of an incarcerated femoral hernia in a Jehovah's Witness patient, highlighting the challenges of managing such cases.
- **Meshless open McVay repair:** The use of a meshless open McVay repair in this case is noteworthy, as it is a less common approach that was necessitated by the patient's religious beliefs.
- **Multidisciplinary teamwork:** The successful outcome of this case was made possible by the collaboration and coordination of a multidisciplinary team of healthcare professionals, emphasizing the importance of teamwork in complex cases.
- **Unique surgical approach:** The case highlights the need for surgeons to be flexible and adaptable in their approach, as the patient's religious beliefs required a non-traditional surgical approach.
- **Important implications for patient care:** This case has important implications for the care of Jehovah's Witness patients and highlights the need for healthcare professionals to be aware of and respectful of patients' religious beliefs and values.

Authorship and Contributions

This case report was a collaborative effort involving a multidisciplinary team of healthcare professionals. The author would like to acknowledge the significant contributions of the healthcare team

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Declarations

1. Ethics approval (include appropriate approvals or waivers): Not applicable.
2. Consent to participate (include appropriate statements): Not applicable.
3. Written Consent for publication (include appropriate statements): not applicable.
4. Availability of data and material (data transparency): the data is available.
5. Code availability (software application or custom code): not applicable.
6. Author contribution: The primary author was involved in the data curation, writing the manuscript and revision of the final manuscript without any outside help.

Written consent of the patient was obtained, since there is no patient information mentioned other than the Age and ethnicity the complete written consent is not applicable.

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