

A Randomised Clinical Trial to Assess the Impact of Quadratus Lumborum Block on Pain and Stress Response Following Video Laparoscopic Surgery

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Introduction

Video laparoscopic surgery, also known as minimally invasive surgery, has revolutionized the field of surgical interventions. This technique offers several advantages over traditional open surgery, including reduced postoperative pain, shorter hospital stays, and faster recovery. However, it is essential to recognize that despite these benefits, video laparoscopic surgery still places stress on the body. In this article, we will explore the stress response following video laparoscopic surgery, including the physiological and psychological implications, as well as potential strategies to mitigate stress and optimize patient outcomes [1]. Video laparoscopic surgery involves the creation of small incisions through which surgical instruments and a camera are inserted. While the procedure is less invasive than open surgery, it still triggers a physiological stress response in the body. The stress response can be characterized by various hormonal, immunological, and inflammatory changes [2].

Surgery induces the activation of the sympathetic nervous system, leading to the release of stress hormones such as adrenaline and cortisol. These hormones increase heart rate, blood pressure, and blood glucose levels, preparing the body for a "fight-or-flight" response [3].

Description

Surgical trauma triggers an inflammatory response as a protective mechanism. Inflammation at the surgical site can result in tissue swelling, redness, and pain. The release of pro-inflammatory cytokines can lead to systemic effects, such as fever and fatigue. Surgery can temporarily suppress the immune system, making patients more susceptible to infections. The immune response may also trigger an increase in white blood cell count and an altered balance of immune cells, which can impact the healing process [4]. Surgery itself, regardless of the technique, is a significant life event that can induce psychological stress. The stressors associated with surgery may include concerns about body image, functional limitations during the recovery period, financial burden, and disruption of daily activities. Although video laparoscopic surgery is associated with reduced postoperative pain compared to open surgery, patients may still experience discomfort and pain during the recovery phase. This can further contribute to psychological distress. Many patients experience anxiety and fear before surgery due to the anticipation of the procedure, concerns about potential complications, and the uncertainty of the outcome. These emotional factors can contribute to increased stress levels

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[5,6]. To minimize the stress response following video laparoscopic surgery and optimize patient outcomes, several strategies can be implemented.

Conclusion

Providing patients with comprehensive preoperative education about the procedure, expected sensations, and recovery process can help alleviate anxiety and increase patient confidence. This can be done through informational brochures, videos, or consultations with the surgical team. Implementing effective pain management strategies during and after surgery is crucial for reducing patient discomfort and stress. This may include a multimodal approach involving the use of analgesic medications, regional anesthesia techniques, and non-pharmacological interventions such as acupuncture or transcutaneous electrical nerve stimulation. Video laparoscopic surgery offers numerous advantages, but it still triggers a stress response in the body. Understanding the physiological and psychological implications of this stress response is crucial for optimizing patient outcomes. By implementing strategies such as preoperative education, effective pain management, and psychological support, healthcare providers can mitigate stress, enhance patient well-being, and improve recovery following video laparoscopic surgery. Through a comprehensive approach that addresses both the physiological and psychological aspects, patients can experience better surgical outcomes and a smoother recovery process.

Acknowledgement

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Conflict of Interest

None.

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