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## Review Article

# A Review: Clinical Application of Electromyography in Abdominal Organs' Smooth Muscle Diseases

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### ABSTRACT

**Introduction:** Lesions in abdominal organs' smooth muscles would obstruct organs from regular functions and lead to diseases. In regarding improve the precision of diagnosis with minimal suffering, electromyography (EMG) is developed to monitor smooth muscle activity and instruct diagnosis.

**Aim:** This review aims to summarize and analyse past literature to discuss the present progress of EMG development and clinical application in monitoring abdominal organs' smooth muscle diseases, focusing on the uterus, urinary system, and gastrointestinal tract.

**Results:** EMG is a reliable tool to monitor smooth muscle activity based on the propagation of action potential with minimal lesions to the human body. Accuracy and the ability to automatically analyse signals are essentials for present EMG development, where some deficiencies can be complemented by other approaches.

**Significance:** This review describes how EMG is currently applied in clinical studies to help diagnose and establish a better understanding of abdominal organs' smooth muscle diseases. The findings will help future research workers to review the present advantages and disadvantages of EMG, and thus improve its accuracy and efficiency. The review also indicates the application of EMG can be extended onto other organs such as the gallbladder, which serves as a new direction to work with.

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