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Advances in Robotic Surgery

Editorial

Robotic Gastrointestinal Surgery: Current Developments and Prospects.

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Robotic surgery has advanced tremendously since its inception and experienced substantial advancement in a remarkably brief amount of time. Robotic platforms may be utilized in the field of minimally invasive surgery to achieve advancements for both the surgeon and the patient. With the advent of 3D vision, motion scaling, EndoWrist tools, steady and magnified pictures, and physiological tremor filtering, several obstacles to laparoscopic surgery could be removed. The field of minimally invasive surgery is always changing to help surgeons accomplish vital objectives related to functionality and survival; robotic platforms may be crucial to achieving these objectives. Therefore, it is essential to assess the functional and oncological results of robotic surgery.Through precise imaging and dissection along the embryological planes, robotic surgery may provide a number of advantages in the field of surgical cancer. Rectal cancer surgery is one instance of its beneficial use, particularly when it comes to male narrow pelvis and bulking tumors [1]. Even when performing surgery for esophageal cancer, the robotic method seems to be somewhat better than laparoscopic surgery, leading to more retrieved nodes and a lower rate of postoperative pneumonia [2].If robotic surgery has shown promising outcomes in oncology, the same can be said for functional problems of the gastrointestinal tract. Even though robotic surgery was shown to be equally effective as laparoscopic surgery in treating functional esophageal diseases [3], but it also shown improved postoperative results for pelvic floor disorders, including shorter hospital stays and fewer complications [4].

Because of the development of transanal surgical systems that enable the performance of extremely difficult procedures, such RTaTME, for low-lying rectal cancer, robotic surgery has also started to play a significant role in endoluminal surgery [5].

The research has clearly shown that robotic surgery has a lower unplanned conversion rate than laparoscopic surgery, despite the fact that there are currently no particular reasons for its usage. Therefore, individuals who have known or suspected abdominal adhesions may be one of the goals of this procedure [6].This Special Issue focuses on the use of robotic surgery in the field of gastrointestinal surgery, as well as the effectiveness and safety of this technique for carrying out a range of operations, including highly difficult ones. There are still obstacles preventing this method from being widely adopted, including high costs, limited availability, and specialized training. Soon,

Emerging robotic platforms will encourage the use of this platform and increase its potential as a routine surgery for many operations by causing significant competition and resulting cost reductions.

Conflicts of Interest

There are no conflict of interest to declare.

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Received: 22-Jan-2025, **; Editor Assigned:** 23-Jan-2025 **; Reviewed:** 13-Feb-2025, **; Published:** 22-Feb-2025,
Citation: Mac Milon,Paol Pietro Banchi. Robotic Gastrointestinal Surgery: Current Developments and Prospects. Advance In Robotic Surgery. 2025 February; 1(1).

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