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Abstract 2

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Introduction

Ever since medical professionals have been operating on patients, the question has been how we can reduce patient hospitalization and recovery time. Open surgery requires large incisions and long recovery times; this exposes the patient to risk of infection, loss of blood, and a large amount of scarring. The current approach to reduce these post-surgical risks is via minimally invasive surgeries, specifically robotic-assisted surgery.

Methods

In the past when major surgeries were performed, for example open abdominal surgeries, a patient could need four to six weeks for recovery, but now with robotic-assisted surgery that time has been cut to days, even walking out of the hospital that day. The most prevalent robotic-assisted surgery device is the da Vinci surgical system. The da Vinci system is utilized to make precise movements within your body as if it was the surgeon's hand. While it may seem like the robot is performing the surgery, it is controlled fully by the surgeon and is an aid to help reduce tremors while providing greater dexterity and accuracy via use of the machine and the camera attached.

Results

Minimally invasive surgeries help to reduce blood loss, scarring, risk of infection, and recovery times. In robotic-assisted surgeries a surgeon makes smaller incisions and inserts miniaturized instruments to perform the operation. Robotic surgery provides surgeons with the ability to perform complex procedures, that would usually require large incisions, with more precision and control than in a typical surgery with a scalpel. Robotic systems, such as the da Vinci, can be used to assist surgeons with cardiovascular, colorectal, thoracic, and urology procedures, among others.

Discussion

Robotic-assisted surgery provides many benefits compared to traditional operation methods. From a patient perspective, it provides peace of mind knowing that intense procedures are completed with less scarring, less loss of blood, a lower risk of infection, and faster recovery times. For surgeons, it provides more consistent outcomes and overall better results.