

ROBOTIC SURGERY

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Background. Robotic Surgery (RS), being one of the greatest and novel advancement of the 21st century shows significant promise and a wider range of implications than one could imagine. By improving accuracy and skill, this nascent technology empowers surgeons to perform procedures previously deemed inappropriate for minimally invasive methods. **Objective of the study.** This literature review aims to highlight the applications, advantages, limitations, and future potential of robotic surgery, with a focus on the da Vinci surgical system. **Material and methods.** A comprehensive review of the impact of the da Vinci system, and the broader implications of robotic surgery using full text articles on PubMed, Google Scholar and several other journals. **Results.** The Da Vinci system provides surgeons with advanced instruments, controlled via a console for precise, real-time manipulation and includes surgeon cart, patient cart, and vision cart. It translates hand movements

into intricate instrument actions with enhanced range and 3D high-definition visualization. RS offers to reduce hand tremors, enhance maneuverability and reduce errors significantly. This advancement contributes to a decrease in surgical complications like infections, reduced discomfort, minimized blood loss, shorter hospitalization periods, faster recuperation, and smaller, less conspicuous scars. Despite its rapid development, RS technology faces several limitations, the main one being cost-effectiveness. **Conclusion.** RS has established safety and favorable outcomes, but the lack of trials comparing robotic-assisted procedures with laparoscopic or open techniques remains a gap. Emerging technologies like virtual reality, haptics, and telemonitoring can complement surgical robots for skill simulation and assessment. **Keywords:** RS, da Vinci system, telemonitoring, haptics.

ROLE OF CYTOREDUCTIVE SURGERY AND HIPEC IN THE MANAGEMENT OF PERITONEAL SURFACE MALIGNANCIES

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Background. Cytoreductive surgery (CRS) in with hyperthermic intraperitoneal chemotherapy (HIPEC) is an effective option for peritoneal malignancies. Primary peritoneal malignancies are rare carcinomas with serous type being the most common. PM spreads through 4 pathways: direct spread via the serosa, lymphatic spread, ascitic fluid redistribution characteristic of pseudomyxoma and ovarian cancer, and hematogenous route used by intra- and extra-abdominal tumors. CRS involves peritonectomy and visceral resections aiming for no residual disease or nodules no larger than 2.5 mm. HIPEC is ineffective for tumor nodules >2.5mm. Electrosurgery is an effective technique to minimize tumor cell dissemination, crucial for the success of HIPEC. **Purpose of the study.** This literature review aims to evaluate the principles underlying CRS and HIPEC, and the criteria for appropriate patient selection. It also addresses the challenges and contraindications associated with these procedures to optimize patient outcomes. **Ma-**

terial and methods. A literature review using full-text articles on PubMed, World journal of gastroenterology, HHS, Asia Journal of Surgery, International Journal of Surgery and several other articles using the relevant Keywords: **Results.** This underscores the need for fastidious patient selection criteria with main prognostic indicators being, histopathology, imaging findings, PCS (<12-15) and CCR. While CRS and HIPEC can significantly improve survival rates in selected patients, the procedure's intricacy calls for a skilled surgical team and comprehensive preoperative assessment. **Conclusion.** CRS and HIPEC embody a potent combination for treating peritoneal malignancies, provided patient selection is meticulously conducted based on established prognostic indicators and systemic health evaluation. Procedural success relies heavily on surgical expertise, effective teamwork, and rigorous adherence to the principles of oncologic surgery. **Keywords:** CRS, HIPEC, PCS, CCR.