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Implementation of a Robotic Emergency General Surgery Program Using the Versius Plus Platform: Initial Experience From the First 30 Consecutive Cases

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Abstract
Background: Despite the widespread adoption of robotic surgery in elective general surgery, its integration into emergency practice remains limited because of organizational and logistical challenges. This study aimed to describe the implementation of an institutional emergency robotic surgery program using the Versius Plus platform evaluating its initial feasibility and short-term perioperative outcomes.
Methods: This retrospective observational study included all consecutive patients who underwent emergency robotic abdominal surgery from March to June 2026. The primary outcome was the feasibility of program implementation, assessed by successful completion of the planned robotic procedure without conversion together with reporting of the institutional selection funnel. Secondary outcomes included short-term postoperative outcomes.
Results: During the study period 48 emergency abdominal procedures were performed and 30 met selection criteria and underwent emergency robotic abdominal surgery. Acute cholecystitis (57%) and appendicitis (33%) were the most common indications. All procedures were successfully completed robotically without conversion to laparoscopy or open surgery. Mean operative time was 58±16 minutes, estimated blood loss was 55±15 mL, and no intraoperative device malfunction occurred. Overall postoperative morbidity was 20%, with no major postoperative complications (Clavien–Dindo grade ≥ III), no reoperations, and a mean postoperative hospital stay of 4.0±1.8 days.
Conclusions: Implementation of a structured emergency robotic surgery program using the Versius Plus platform was feasible with acceptable short-term outcomes in selected patients during the initial institutional experience.
Keywords: emergency surgery, robotic surgery, Versius, acute care surgery, general surgery, minimally invasive surgery