

Impact of changes in surgical technique of benign elective hysterectomy on perioperative care

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Introduction: Robotic surgery is the leading innovation in the world of surgery in recent years. Hysterectomy is one of the most common elective gynaecological procedures in the world. During recent decades' minimal invasive techniques have increased their role, when first laparoscopic and then robot-assisted laparoscopic techniques were introduced

Aims: To study how the change in surgical technique of benign elective hysterectomy has impacted the perioperative care at Danderyd Hospital.

Material and Methods: All patients that had undergone benign elective hysterectomy of the types abdominal, laparoscopic or robot-assisted laparoscopic hysterectomy at Danderyd Hospital were included and their data were imported from the Swedish Perioperative Register (**SPOR**). The patients were divided into groups depending on their type of surgery. The groups were then compared.

Results: 270 patients had undergone hysterectomy at Danderyd Hospital. The robot-assisted group had a shorter mean duration of surgery (109,5 minutes) than both the abdominal group (135,5 minutes, $p < 0,0001$) and the laparoscopic group (128,7 minutes, $p = 0,001$). The robot-assisted group also had a shorter mean duration of anaesthesia (178,4 minutes) than the laparoscopic group (198,6 minutes, $p = 0,021$). No significant differences in mean duration of anaesthesia were found between the abdominal group (190,5 minutes) and the other groups.

Conclusions: Robot-assisted laparoscopic hysterectomy at Danderyd Hospital had a shorter mean duration of surgery compared to abdominal and laparoscopic hysterectomy, as well as a shorter mean duration of anaesthesia than laparoscopic hysterectomy.

Keywords: anaesthesia; general anaesthesia; inhalation anaesthesia; intravenous anaesthesia; hysterectomy; perioperative time events; perioperative time events; perioperative care; minimally invasive surgery.