Overall cost for robotic surgery relatively low: Study

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KOCHI: According to a recent study, the total cost incurred for a patient who undergoes robotic surgery for endometrial cancer (EC) is much lower as compared to open surgery. The former saves a total of USD 107.7; this includes the cost of medicines, intravenous (IV) fluids and materials.

In the United States, cancer of the endometrium (inner layer of uterus) is the most common cancer of female reproductive organs. In India, the rate is as low as 4.3 per 100,000 people and in Kerala it is still higher. Surgery is the primary treatment of choice for EC.

The study, ‘A retrospective evaluation of the perioperative drug use and comparison of its cost in robotic vs open surgery for endometrial cancer’ published in the Journal of Robotic Surgery, part of international publisher Springer, was carried out to compare the usage and cost in robotic vs open surgery for EC. It was conducted at department of gynaecologic oncology, Amrita Institute of Medical Sciences (AIMS), between January 2014 and June 2017.

It studied early stage EC or atypical hyperplasia in women, who underwent robot-assisted or open surgery. Data on surgical time, blood loss, post-anaesthesia care unit (PACU) stay, and length of hospital stay; drug and IV fluid use were collected for three distinct periods - intra-operative, PACU, and ward. Direct medicine and material costs associated with the administration of IV fluids and drugs were collected. All parameters were compared between two surgical groups - a total of 133 (54 open and 79 robotic-assisted) patients.

The results showed that when compared to open surgery, robotic surgery was associated with significantly lower medicine and material costs attributed to IV fluids, analgesia (pain killers) and anti-emetics (for vomiting and nausea). It helped save USD 19.5 in IV fluids, USD 49.2 in analgesics, USD 13.33 in anti-emetics and USD 37.8 in material.

"Robot-assisted surgery has long been criticised on the ground of high cost. But when you look at the cost spent on medicines, especially pain killers, antiemetics and fluids that accounts for the main bulk of non-operative expenditure and duration of stay in the hospital, it is found that the cost involved is lesser," said Dr Anupama Rajanbabu, one of the authors of the study.

"However, the limitation of the study is that it is based on a single institute experience," added Dr Anupama. AIMS started performing robot-assisted hysterectomy in 2015.