

Anesthesia Meet-2018: A randomized controlled trial to evaluate the perioperative role of intra-operative dexmedetomidine infusion in robotic assisted laparoscopic onco-surgeries - Susan Paulin - Tata Memorial Hospital, Mumbai, India

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The clinical use of laparoscopic medical procedure has become quickly in the course of the most recent couple of years. Since the main documentations of laparoscopic lymphadenectomy, numerous reports feature the utilization of present day laparoscopy in the field of gynecologic oncology. Laparoscopic treatment of beginning time cervical and endometrial malignant growth, and laparoscopic assessment and organizing of cervical, ovarian, and endometrial carcinomas, are possible strategies. The spot of insignificant access medical procedure in the arms stockpile of gynecologic oncological medical procedure has been built up, particularly after the ongoing turns of events and down to earth utilization of video laparoscopy, novel instrumentation, and progressed careful methods. Albeit employable laparoscopy in gynecologic oncology is still in its early stages the possibility of the technique is underscored. Numerous patients may profit by the treatment or organizing of gynecologic malignancies with laparoscopic implies. Writing reports feature that laparoscopy might be a successful strategy with lower horribleness and complexity rates than customary stomach medical procedure. The short emergency clinic remain and recuperation time have a positive effect in a malignancy patient's personal satisfaction, as they come back to typical exercises quickly. Numerous dangers, however, may emerge from the use of negligible access medical procedure in disease patients, and numerous inquiries in regards to security and viability need answers, in light of forthcoming clinical preliminaries. We should accentuate that such examinations with enormous patient numbers and long haul follow-up are deficient. Until results

from these preliminaries are accessible, laparoscopic oncologic methods ought to be performed distinctly in an investigational setting by master groups. Robotic and minimal invasive surgeries have revolutionised surgical outcomes. These pose challenges in both intra operative and post-operative management. Dexmedetomidine (dexmed), with distinct properties of sedation and analgesia has emerged as a promising drug. Our primary aim, in this double blinded study, was to evaluate reduction in intra operative opioid requirement by using intravenous infusion of dexmed and the time to first rescue analgesic postoperatively. Methods: After necessary approvals and informed consent from subjects 46 patients were enrolled in the trial. As per computer generated randomisation chart patients were randomised into dexmed arm and placebo arm. Five minutes after insufflation, the study drug was started as a bolus of 1µg/kg over 10 minutes followed by 0.2 µg/kg/h maintenance till release of pneumoperitoneum while equivalent amount of saline was run in the control arm. Intra operatively drug titration was permitted in response to hemodynamic changes. When unresponsive, fentanyl boluses and minimum alveolar concentration (MAC) titration were allowed. One of the foundations of gynecologic malignancy medical procedure is the evaluation and evacuation of the retroperitoneal lymph hubs. Various reports have exhibited that, when performed by profoundly talented people, laparoscopic lymphadenectomies can be performed securely. This has prompted the examination of laparoscopy in the careful arranging and treatment of patients with ovarian, cervical, and endometrial malignant growths. This promising methodology can possibly alter various

parts of the administration of gynecologic malignancies. In any case, it must be underlined that the utilization of laparoscopy for gynecologic malignancies is still in its earliest stages. Studies that give intricacy rates and long haul results are simply starting to be accounted for. Progressively clinical information are vital before the laparoscopic strategies are acknowledged as new careful principles. Progressing, forthcoming clinical preliminaries will help answer a considerable lot of the inquiries with respect to the security and viability of gynecologic laparoscopy. Until more information aggregate, usable laparoscopy will stay a promising, however dubious, device in the administration of patients with gynecologic malignancies. Contingent upon the purpose behind the hysterectomy, a specialist may decide to expel all or just piece of the uterus. Patients and social insurance suppliers now and then utilize these terms estimatedly, so it is imperative to explain if the cervix as well as ovaries are evacuated: In a supracervical or subtotal hysterectomy, a specialist evacuates just the upper piece of the uterus, keeping the cervix set up. An absolute hysterectomy evacuates the entire uterus and cervix. In an extreme hysterectomy, a specialist expels the entire uterus, tissue on the sides of the uterus, the cervix, and the top piece of the vagina. Radical hysterectomy is commonly possibly done when malignant growth is available.

The ovaries may likewise be expelled - a system called oophorectomy or might be left set up. At the point when the cylinders are expelled that system is called salpingectomy. Along these lines, when the whole uterus, the two cylinders, and the two ovaries are expelled, the whole methodology is known as a hysterectomy and respective salpingectomy-oophorectomy.

Results: General demographics were comparable. The mean intra operative fentanyl requirement was significantly lower in the dexmed group $192.6 \mu\text{g} \pm 66.39$ versus in saline group $260.7 \mu\text{g} \pm 88.57$ (p 0.013). Lower MAC of inhalational agent was recorded in the dexmed group at 30

minutes (p 0.02), 1 hour (p 0.017) and 2 hours (p 0.028). Intra operative episodes of hypotension and bradycardia were similar in both groups. There was no discontinuation of study drug due to hypotension or bradycardia. Also, time to eye opening, first analgesic request, Ramsay sedation scores, 24 hours post-operative pain scores and side effects profile were comparable. Discussion: Dexmed has been shown to have significant analgesic and anaesthetic sparing effects in literature. In order to avoid hemodynamic fluctuations, we selected a lower rate for maintenance infusion. While no analgesic benefit was seen with the dosage used, significant results have been shown in laparoscopic surgeries with higher rates which needs to be studied in robotic surgeries. Thus the drug has a promising role in opioid sparing strategies and can be incorporated in suitable multi modal anaesthetic plan for perioperative care in robotic surgeries.

Keywords: Dexmedetomidine, opioid sparing, pneumoperitoneum, robotic surgeries