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Invitation for PhD defense

by Hayder Alhusseinawi

LOW PNEUMOPERITONEUM DURING ROBOTASSISTED RADICAL PROSTATECTOMY.

15.12.2023
Time 13:00. in the meeting room: 11.00.035,
Place (Selma Lagerløfs Vej 249, 9260 Gistrup)

DET SUNDHEDSVIDENSKABELIGE FAKULTET
AALBORG UNIVERSITET

AALBORG UNIVERSITETSHOSPITAL

About the PhD thesis

Initiating pneumoperitoneum (Pnp) in minimal invasive surgery (MIS), through the insufflation of CO2 into the peritoneal cavity, triggers a sequence of physiological alterations in several organs. These physiological changes are influenced by an increase in Intraabdominal Pressure (IAP) and hypercapnia resulting from CO2 absorption. Studies investigating the effect of Pnp on post-operative Quality of Recovery (QoR) or renal function are scarce.

This Ph.D. thesis aimed to investigate the effect of low Pnp on QoR and renal function. Additionally, it assessed the possible risks associated with operating under low Pnp, including sacrificing the workspace, injury to adjacent organs, and a theoretical increase in the risk of bleeding in a randomized triple-blinded study. The work included three papers published in peer-reviewed journals.

The research involved a randomized, triple-blinded trial with 98 patients undergoing robot-assisted radical prostatectomy (RARP). Low Pnp (7 mmHg) did not compromise the surgical workspace. There was a significant improvement in patient QoR on the first postoperative day, with enhancements in pain, physical comfort, and emotional state domains. A minor increase in blood loss was observed in the low Pnp group. Low Pnp pressure resulted in significantly lower levels of urinary neutrophil gelatinase-associated lipocalin (u-NGAL), a key marker of renal injury.

In conclusion, the research provides a nuanced understanding of the impacts of low Pnp during RARP. Low Pnp enhances postoperative recovery, reduces renal injury, and proves feasible without compromising the surgical workspace. The results lay the groundwork for further research to validate the potential benefits of low Pnp, aiming to optimize surgical strategies and improve patient outcomes. This doctoral work significantly contributes to the limited body of knowledge on the effects of low Pnp during MIS, with implications for refining surgical practices and improving patient outcomes, extending the impact beyond the specific context of prostatectomy.

Invitation for PhD defense

The Department of Clinical Medicine, Aalborg University and Aalborg University Hospital are pleased to invite to PhD defense by *Hayder Alhusseinawi,* who will defend the thesis entitled:

LOW PNEUMOPERITONEUM DURING ROBOT-ASISTED RADICAL PROSTATECTOMY

The PhD defense will take place
15.12.2023
Time 13:00. in the meeting room: 11.00.035,
Place (Selma Lagerløfs Vej 249, 9260 Gistrup)

After the defense there will be held a reception. All are welcome.