Continuous Transverse abdominis plane block vs thoracic epidural anesthesia in patients undergoing to radical cystectomy in a enhanced recovery after surgery program: a retrospective cohort study.

Casans Francés R¹, Ferrer Ferrer ML¹, Pérez Pascual LI¹, García Lecina AC¹, Roberto Alcácer AT², Guillén Anton J¹.

¹: Dept of Anesthesiology & Pain Medicine. Hospital Clínico Universitario “Lozano Blesa”, Zaragoza, Spain

²: Dept. of Urology. Hospital Clínico Universitario “Lozano Blesa”, Zaragoza, Spain

rcasans@gmail.com

Background and Goal of Study:

TAP block has been described as an alternative to thoracic epidural for abdominal surgery. The objective of our study is to compare the results of both techniques in an ERAS environment of a major abdominal surgery, as radical cystectomy.

Materials and methods:

Retrospective analysis of patients undergoing ERAS radical cystectomy by open approach since June 2011 until December 2014. A continuous TAP Block (Bolus: Levobupivacaine 0.25% 10 ml and Perfusion: Levobupivacaine 0.1% - 8 ml/H by side) was implemented in those patients where the anesthesiologist was not able to implement a thoracic epidural catheter (3 attempts in different spaces or 20 minutes). Patients underwent general anesthesia under desflurane, remifentanyl and rocuronium. Patients were monitored by an arterial line and a transesophageal doppler in order to maintain MAP < 70 mmHg and maximize stroke volume using norepinephrine and fluid challenges.

Morbidity, mortality, readmission, reintervention, length of stay, need of nasogastric tube, parenteral nutritions, infused fluids, noradrenaline, hemodynamic variables and analgesia quality were compared between groups. Discrete variables were assessed by Fisher’s test and continuous ones by Wilcoxon’s test. Trends were assessed by ANOVA test for nonparametric Data.

Results:

No differences in VAS score were found between groups. (Figure 1). Increased complications and hospital stay was detected in TAP group, but not statistically significant. (Figures 2 and 3) TAP group needed significative more use of nasogastric tube during postoperative period. (Figure 3). Although both groups had similar needs of intraoperative drugs and fluids, epidural group had better cardiac performance. (Figure 4).

Figure 1: VAS (24 and 48 hours)

Figure 2: Hospital and Critical Care LoS, Time under anesthesia

Figure 3: Discrete Outcome forest plot

Figure 4: Noradrenaline, fluidtherapy & SVI trends (SVI ANOVA p-value = 0.0242)

Conclusion:

Thoracic epidural provides better cardiovascular performance against TAP and may improve postoperative outcomes in ERAS environment.