PE12 Use of transversus abdominis plane block to decrease pain scores and narcotic use following robot assisted laparoscopic prostatectomy

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Introduction & Objectives: To assess whether transversus abdominis plane (TAP) blocks can be utilized to decrease patient pain scores and narcotic use during the first 24 hours following robot assisted laparoscopic prostatectomy (RALP).

Materials & Methods: 100 patients received a TAP block with a mixture of 1.3% liposomal bupivacaine, 0.5% Marcaine and 0.9%NaCl prior to RALP. This was in addition to an already established pain management regime, which included preoperative PO acetaminophen (650 mg), celecoxib (200 mg), and tolterodine ER (4 mg). These patients were prospectively followed and then retrospectively compared to a 1:1 propensity match group of 100 patients that did not receive a TAP but did receive the preoperative PO medications. Pain scores were assessed on a scale from 1-10 in the PACU; as well as; the surgical floor at 8, 16, and 24 hours post surgery. Intra/post-operative narcotic use and time to ambulation following arrival to the surgical floor were also analyzed.

Results: Patient receiving TAP blocks had immediate post op pain scores of 2.23 vs. 4.26 for those not receiving TAP blocks (p=0.000). The pain scores at 8, 16, and 24 hours for TAP patients were 2.68, 2.62, and 2.62; as compared to 2.89, 2.87, and 3.36 for non-TAP patients. The difference was statistically significant for immediate and 24-hour pain scores (p=0.000, 0.001 respectively). On average TAP block patients ambulated faster than non-TAP patients, 2.68 vs. 4.91 hours (p=0.000). Intra-operative narcotic use was decreased in the TAP group for each of the opioids that were used: Fentanyl 177.5 vs. 205mcg (p=0.001), Morphine 5.5 vs. 10 mg (p=0.000), and Hydromorphone 0.75 vs. 1.75 mg (p=0.001). Narcotic usage in the PACU was limited to hydromorphone and TAP patients used 0.7 mg compared to 1.36 mg (p=0.003) for non-TAP patients. Oral oxycodone/acetaminophen (5 mg/325 mg) was used for pain control on the surgical floor and on average TAP patients received less, 2.4 vs. 5 tabs (p=0.000). Average time to perform the TAP block was 3.5 minutes and total OR time for TAP vs. non-TAP patients was 107.41 vs. 106.58 minutes (p=0.386).

Conclusions: TAP blocks as part of a perioperative pain management protocol can be utilized during RALPs to decrease patient pain scores at two different time intervals, immediately post-operative and 24 hours after surgery. Patients also ambulate sooner following surgery and require a decreased amount of narcotics during the intra-operative and post-operative periods. TAP blocks are quick, effective, and do not add a significant amount of OR time to RALPs.