Shoulder pain after thoracotomy and video thoracoscopy, An approaching to this complication: pilot study in La Princesa Hospital

*Article in* European Journal of Anaesthesiology · June 2011

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**Introduction:**

Portsmouth Queen Alexandra Hospital, Department of Anaesthesiology and
El Bayoumy R., Guirgis R., Guyer C.

Laparoscopic gynaecological procedures: A prospective study

This practice should be further evaluated and considered in selected laparoscopic procedures using intrathecal Morphine and Fentanyl.

**Background and Goal of Study:**
Laparoscopic surgery may be associated with severe postoperative pain. The aims of our current study were to assess the effect of combined general and intra-thecal (IT) morphine + fentanyl on postoperative pain score, analgesia requirements and patients' satisfaction following laparoscopic procedures.

**Materials and Methods:** This is a prospective randomized controlled study. After IRB approval Thirty three adult patients underwent laparoscopic procedures were randomly assigned to receive intraoperative IV fentanyl [group 1, N= 16] or IV remifentanil+ IT morphine (3.0-3.6 mg) and fentanyl (15 mcg) [Group 2, N=17]. Intrathecal morphine Patient Control Analgesia (PCA) was given to all patients for pain control during the recovery period. Postoperative pain scores were evaluated in post anesthesia care unit (PACU) every 30 minutes and at post operative day (POD) 1 and 2. Pain scores were assessed at rest and while coughing using visual analog scale (VAS) 0-10 scale. PCA requirements, additional analgesic medications, hemodynamic parameters, oxygen saturation, side effects and patient satisfaction were recorded as well.

**Results and Discussion:** Both groups were well matched with regard to demographic data and hemodynamic parameters. Total IV postoperative morphine requirements were significantly lower in the group 2 compared to group 1 in the PACU (8.0 ± 13.7), POD1 (7.86 vs. 31.18) and POD2 (4.55 vs. 20.2) mgs (p = 0.044, 0.003, 0.011 respectively). Postoperative VAS’s were significantly lower in group 2 both at rest and while coughing in the PACU, POD1 and POD 2 . Patients in group 1 demanded significantly higher additional analgesics beside morphine: 84.6% compared to 15.4% in group 2 (P< 0.001). Patients’ satisfaction was significantly higher in group 2 (scale 1-10): 9.91 vs. 6.54 in group 1 (P< 0.0001). No significant side effects were noted in both groups.

**Conclusion(s):** Our findings demonstrated that intrathecal morphine and fentanyl combined with general anaesthesia significantly reduces pain score and analgesia requirements in the postoperative period following laparoscopic surgery. Higher patient satisfaction in the Intragral group was significant as well.

This practice should be further evaluated and considered in selected laparoscopic surgery.

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**14AP5-1**

Post-operative pain relief following laparoscopic abdominal surgery: General anesthesia versus combination with regional anesthesia using intrathecal Morphine and Fentanyl

Segal D., Assalia A., Weissman A., Edry R.

Rambam Health Care Campus, Department of Anaesthesiology, Haifa, Israel

**Background and Goal of Study:**

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This practice should be further evaluated and considered in selected laparoscopic surgery.

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**14AP5-2**

Trans-abdominal plane (TAP) block analgesia for day-case laparoscopic gynaecological procedures: A prospective study

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**Introduction:** The Transversus Abdominis Plane (TAP) block is a regional anaesthetic technique which has been utilised as an analgesic adjunct for a number of surgical procedures. We prospectively evaluated the efficacy of this technique in day-case laparoscopic gynaecological procedures: diagnostic laparoscopy, laparoscopic sterilisation, laparoscopic treatment of endometriosis & laparoscopic removal of an ovarian cyst.

We selected ASA 1 & ASA 2 patients for our study.

**Methods:** A consecutive cohort of 50 patients undergoing day-case laparoscopic gynaecological procedures had a bilateral TAP block under ultrasonographic guidance administered by a single anaesthetist following induction of anaesthesia. Post-operative pain scores were prospectively quantified in the recovery bay by nursing staff using a visual analogue scoring (VAS) system (range of 0-10). Patients were then phoned on Day 1 and Day 3 post-surgery and asked to quantify their pain using a visual analogue Score (0-10). These scores and clinical outcomes were compared with a contemporaneous control cohort of 50 patients who underwent laparoscopic gynaecological procedures without TAP block.

**Results:** There were no adverse events associated with the insertion of TAP block. Patients who underwent TAP block had significantly lower pain score in recovery 

(0.25 ± 0.07 vs. 0.94 ± 0.21; p = 0.01) and on day 1 (2.8 ± 0.2 vs. 5.8 ± 0.3; p = 0.0002) as compared with the control group. However by day 3 post-surgery, the patients pain scores were not significantly different in either group (2.1 ± 0.2 vs. 2.9 ± 0.3; p = 0.16).

Mean morphine consumption per 24 hours on the TAP group was statistically-significant (6.21 ± 1.1 vs. 21.56 ± 2.3; p = 0.01) as compared with the control group.

Mean hospital stay overnight on the TAP group was as well significantly lower (3.41 ± 0.71 vs. 32.51 ± 5.1; p = 0.001) as compared with the control group.

**Conclusion:** The TAP block is a safe and effective technique which provides superior short-term analgesia for patients undergoing day-case laparoscopic gynaecological procedures. It helps as well to cut hospital costs & reduce the risk of nosocomial infections due to shorter stay in the hospital wards.

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**14AP5-3**

Shoulder pain after thoracotomy and videothoracoscopy: An approaching to this complication: Pilot study in La Princesa Hospital

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Hospital La Princesa, Department of Anaesthesiology and Intensive Care, Madrid, Spain

**Background and Goal of Study:** The 21-97% of patients undergoing thoracic surgery suffers ipsilateral shoulder pain in the postoperative. The objective is to determine the incidence and characteristics of this pain in the first 24 hours after thoracotomy and videothoracoscopy (VATS).

**Materials and Methods:** Pilot epidemiology descriptive study. 20 patients undergoing thoracic surgery by thoracotomy or VATS were consecutively selected between April and May 2010. Anaesthesia technique followed a protocol. Inclusion criteria: informed consent agreement. Exclusion criteria: Previous ipsilateral shoulder pain, drug abuse, analogic visual scale (VAS) correctly understanding. Measures: Pain at ipsilateral shoulder pain was evaluated by VAS at wake up, 2, 6, 12 and 24 hours at rest, 90° shoulder abduction and cough. Rhythm, intensity and localization were registered at wake up, 12 and 24 hours. Statistical analysis was made using SPSS® v15.0.

**Results and Discussion:** Patients with ipsilateral shoulder pain at rest at wake up were 45% (VAS mean 2.1; 2.09-2.14 Cl95%) and 30% (VAS mean 0.8; 0.63-0.97 Cl95%) at 24 h. Mean VAS shoulder pain at rest, shoulder abduction 90° and cough are in graph 1.

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**Graphic Guidance**
**Rhythm, intensity and localization are at table 1.**

<table>
<thead>
<tr>
<th>Rhythm</th>
<th>Intensity</th>
<th>Localization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constat</td>
<td>Intermittent</td>
<td>Conti-nuous</td>
</tr>
<tr>
<td>Wake up</td>
<td>6 (65.7%)</td>
<td>3 (33.3%)</td>
</tr>
<tr>
<td>12 hours</td>
<td>4 (50%)</td>
<td>5 (62.5%)</td>
</tr>
<tr>
<td>24 hours</td>
<td>5 (83.3%)</td>
<td>5 (83.3%)</td>
</tr>
</tbody>
</table>

Although the pain frequency is high the intensity is low. Shoulder pain increase is bigger at cough than at 90° abduction. The size of the population sample limits our results.

**Conclusion(s):** Ipsilateral shoulder pain is a frequent complication in the thoracic surgery; it is not very intense and is related to movement and cough according to our results.

**References:**

**14AP5-5**

The combination of infiltrative bupivacaine with low pressure laparoscopy reduces postcholecystectomy pain

**Background and Goal of Study:** Postoperative pain remains one of the major problems faced in postoperative period of laparoscopic cholecystectomy (LC). Several studies have reported different pain management strategies, but no previous study has specifically described the efficacy of low pressure pneumoperitoneum combined with local anesthetic infiltration.

This paper aims to describe the efficacy of infiltrative bupivacaine combined with low intraperitoneal pressure insufflation in reducing the postlaparoscopic pain in patients undergoing LC.

**Materials and Methods:** The study was performed at the Department of Surgery and the Service of Anesthesiology & Intensive Care of the UHC Mother Theresa in Tirana, Albania during the period 2006-2009. 473 ASA 1 and 2 patients scheduled to undergo general anesthesia for LC were included. The patients were divided in four groups: the first group with intraabdominal insufflation pressure 10-12 mmHg and no infiltrative bupivacaine (HPBG), the second group with intraabdominal insufflation pressure 10-12 mmHg and 5 ml infiltrative bupivacaine 0.5% in abdominal minicisions (HPBG), the third group with intraabdominal insufflation pressure under 10 mmHg and no infiltrative bupivacaine (LPBG) and finally the fourth one with intraabdominal insufflation pressure under 10-12 mmHg and 5 ml infiltrative bupivacaine 0.5% (LPBG). After conventional induction, the CO2 insufflation and laparoscopic insufflation pressure under 10-12 mmHg and no infiltrative bupivacaine (HPBG), the third group with intraabdominal insufflation pressure under 10-12 mmHg and 5 ml infiltrative bupivacaine 0.5% (LPBG).

**Results and Discussion:** There were no differences between demographic characteristics and duration of the intervention. The TAP block significantly reduced the intraoperative use of remifentanil (402.5±93.8 vs 607.5±40.6, P<0.001). Pain score early after the operation, the ratio of patient who used analgesic drug, and the frequency of its use are all decreased by performing the block. The use of curare was reduced between the two groups (x²=26.6; P<0.001). Concerning the postoperative complications, the TAP block reduced only the risk of nausea and vomiting (x²=10.98; P<0.001).

**References:**