

Print

Close

**A570**

October 24, 2005

9:00:00 AM - 10:30:00 AM

Room C207

**Analgesic Requirements and Postoperative Recovery after Elective Compared to Unplanned Cesarean Delivery**

Brendan Carvalho, F.R.C.A., Surbhi Sarna, Amit Saxena, Andrea Fuller, M.D., Edward Riley, M.D.  
Department of Anesthesia, Stanford University School of Medicine, Stanford, California, United States

**Introduction:** Studies examining the effects of various analgesic and anesthetics on postoperative pain following cesarean delivery (CS) conventionally use the scheduled CS population. This limits the number of subjects post-CS pain studies can be conducted on. We are unaware of any studies comparing post-operative analgesic requirements and recovery profiles in woman undergoing elective compared to unplanned CS following labor.

**Methods:** Following IRB exemption approval, we conducted a retrospective chart review of the last 200 cesarean deliveries undertaken at Stanford University Hospital, California. We examined the records of 100 patients who underwent scheduled CS under spinal (1.6 ml intrathecal bupivacaine with 10 mcg fentanyl and 200 mcg morphine) and 100 patients that had CS following labor under epidural anesthesia (10-25 ml epidural 2% lidocaine top-up with 4 mg morphine after cord clamping). We recorded pain scores, analgesic consumption, time to first analgesic request, side effects and length of stay. Data was collected over a two month period (July-August 2004). Analyses included descriptive and inferential statistics using appropriate parametric and nonparametric testing with  $p < 0.05$  considered statistically significant.

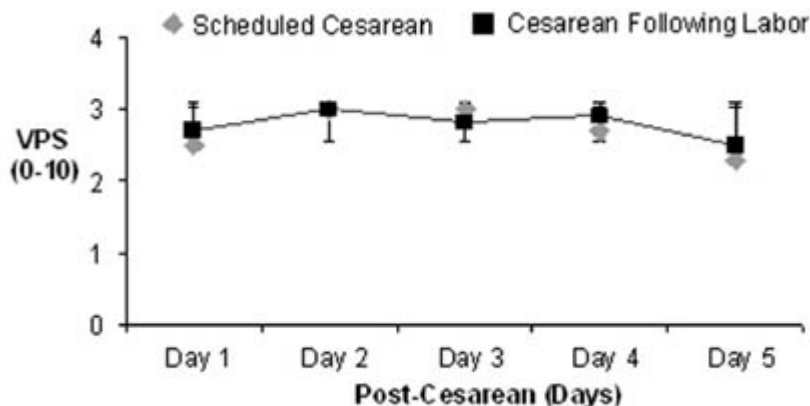
**Results:** We found no difference between scheduled CS and CS following labor in respect to postoperative pain scores (Figure) and analgesic consumption (Table) for up to five days following CS. There were no differences in respect to side effects such as nausea, vomiting or pruritus ( $p > 0.05$ ). Posthoc power analysis indicated we had 92% power to detect a clinically significant difference (30% reduction) in postoperative opioid analgesic consumption between the two groups ( $P < 0.05$ ).

**Conclusion:** Postoperative pain, analgesic consumption and side effects were similar in patients undergoing either scheduled CS with 200 mcg intrathecal morphine or CS following labor with 4 mg epidural morphine. These results indicate that these neuraxial morphine doses provide similar postoperative analgesia. Unplanned CS can be a viable surgical model to investigate analgesia and recovery following CS.

**References:**

1. BJA 2003; 91:690-4; 2. Anesth Analg 2002; 95:436-40[figure1][figure2]

Anesthesiology 2005; 103: A570

**Figure 1****Figure 2**

**Table:** Analgesics consumed during the five day post-Cesarean period

<b>Analgesics Used</b>	<b>Scheduled Cesarean</b>	<b>Cesarean After Labor</b>	<b>Statistical Significance</b>
Oral Opioids (mg)*	82 ± 51	94 ± 54	P = 0.58
IV Morphine (mg)	0.7 ± 2.6	0.5 ± 2.7	P = 0.60
Ibuprofen (mg)	1921 ± 2319	2118 ± 2326	P = 0.24

Values are presented as mean ± SD; \*Oral opioids consists of hydrocodone and oxycodone converted to IV morphine equivalents in a 7.5:10 ratio.