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**TITLE:**A SPINAL CATHETER DOES NOT REDUCE POST-SPINAL HEADACHE AFTER CEASAREAN SECTION.

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Continuous spinal anesthesia is an anaesthetic technique used in cesarian section. Local anesthetics are injected incrementally through a spinal catheter until the required level of block is obtained, thus reducing and avoiding sudden hypotension. Another advantage of the spinal catheter may be the reduction of post-spinal headache, as suggested by a previous publication.<sup>1</sup> However, these results were obtained in older patients. The purpose of this research was to determine if the incidence of post-spinal headache after C-section can be reduced by keeping a 28g spinal catheter in place for 24 hours.

With the approval of the institutional research and ethic committee, 32 women scheduled for C-section received spinal anesthesia with a 22G "Quincke" needle, through which a 28g spinal catheter (Preferred Medical Products) was introduced. The anesthetics were progressively injected through the spinal catheter until a T4-T3 anesthesia block was obtained. The patients were randomly placed into two groups. Group 1 had the spinal catheter removed at the end of the surgical procedure, group 2 had the catheter removed 24 hours later. The parameters measured are listed in table 1. An analysis of variance was used to compare the results with a P < 0.05 accepted as significant.

There was no difference between the groups in age, weight, previous C-section, liquid perfused during the procedure and volume of anesthetic injected in the subarachnoid space. Typical post-spinal headache occurred in 12 patients, 6 in each group. Of these, 8 ( 5 in group 1, 3 in group 2) were effectively treated with a blood patch. The other patients were treated with analgesics and bed rest.

These data confirm a high incidence of headache (37.5%) after spinal anesthesia for C-section with a 22g needle. Although continuous spinal anesthesia with catheterization of the subdural space has some advantages, use of the catheter does not affect the incidence of headache in patients undergoing C-section.

**Reference**

1. Anaesthesia Analgesia, 1987, pp 791-794.

	Group 1 n=17	Group 2 n=15
Mean age	29 ± 4	32 ± 5
Mean weight (Kg)	76 ± 20	79 ± 25
Patients with previous caesarean	11/17 (65%)	12/15 (80%)
Total of fluid perfused (ml)	2,600 ± 577	2,600 ± 445
Anesthetic injected (ml)	1.9 ± 0.6	2.3 ± 0.4
Post spinal headache (%)	35.2 (6/17)	40 (6/15)
Mean delay of occurrence of P.D.P.H. (hr).	40 ± 17	48 ± 14
Mean duration of P.D.P.H. (hr)	46 ± 17	57 ± 22
Blood patch (No. of patients)	5	3
Paresthesia (%)	41.1 (7/17)	46.6 (7/15)

None of the differences between the two groups are significant (p<0.05)

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**Title:** Intrathecal Fentanyl Does Not Improve Intrathecal Morphine Analgesia After Cesarean Section.

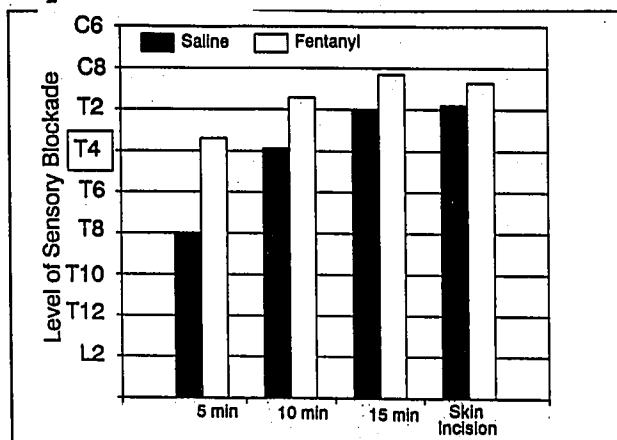
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**Introduction:** Intrathecal morphine provides effective post cesarean section analgesia, but patients may suffer pain before morphine takes effect. Fentanyl, a more lipophilic narcotic, provides pain relief with a rapid onset but relatively brief duration. We designed this study to determine if adding fentanyl to intrathecal morphine and bupivacaine would improve patient comfort intra- and post-operatively without causing an unacceptable increase in narcotic side effects.

**Methods:** Forty-two healthy term parturients scheduled for elective cesarean section under spinal anesthesia consented and participated in this IRB approved investigation. In a randomized, double-blind sequence, women received spinal anesthesia with 12 mg hyperbaric bupivacaine, 0.15 mg morphine and either 0.2 ml saline (21 patients) or 0.2 ml (10 µg) fentanyl (21 patients). We obtained visual analog scores for pain, itching and nausea at skin incision, delivery, peritoneal closure, 1,1-1/2,2,3,4,6 and 24 hours post-induction. Level of sensory blockade was recorded every 5 minutes for the first 15 minutes then at the above times until regression to L2. We noted use of supplemental analgesic or antiemetic medication. Groups were compared *via* analysis of variance for repeated measures.

**Results:** The groups differed in neither demographic variables nor in time to skin incision, delivery and closure. In addition, they did not differ in time to first postoperative narcotic or antiemetic or in the number of patients requiring such medication. Total postoperative pain medication did not differ between groups. Pain, nausea and itching did not vary between groups. The time to onset of T4 sensory blockade was significantly faster in the fentanyl group (8.3 ± 4.3 min) than the saline group (13.1 ± 4.4 min)(Figure). There was no difference in time to regression of sensory blockade to L2.



**Discussion:** Despite the more rapid onset of sensory blockade, fentanyl dose not improve the analgesic efficacy of bupivacaine and morphine anesthesia for cesarean section. We doubt that adding intrathecal fentanyl to intrathecal morphine provides any clinically significant benefit.