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3AP4-11

Does Atraucan cause more post-dural puncture backache?

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Background and Goal of Study: Post-dural puncture backache (PDPB) is the most frequent complaint after spinal anesthesia. In the literature its importance is generally overshadowed by post-dural puncture headache. We studied two different kinds of spinal anesthesia needles from the point of their technical handling capacities and incidences of PDPB.
Materials and Methods: Data of two hundred fifty six pregnant female patients undergone cesarean delivery under spinal anesthesia were collected for the study. Patients were put into one of the two groups according to the spinal needle used. Patients that had spinal puncture with 26-Gauge Atraumatic needle (Atraucan®, B.Braun Melsunger, Germany) were put into the Group A (n = 109) and those having puncture with 26-Gauge Quincke (Spinocan®, B.Braun Melsunger, Germany) into the Group Q (n = 147). Backache incidence for postoperative one week period, severity, onset time and duration were recorded, as well as puncture attempts and spinal anesthesia procedure duration.
Results and Discussion: Spinal anesthesia had been successfully performed at one attempt in 92.7% and 86.4% of patients in the Groups A and Q respectively. PDPB was encountered in 62.4% and 44.2% of the patients in the Groups A and Q respectively, and the difference was statistically significant (P = 0.037).
Two hypotheses may be suggested about the issue. The first is that the thicker spinal needle you use, the more PDPB you encounter. The thicker needles cause greater trauma and more inflammation in the tissue resulting in more PDPB. The second hypothesis is that repeated spinal puncture attempts cause PDPB. Atraucan spinal needle is used with an introducer that is quite thicker than the subarachnoid needle itself. It may cause more PDPB than needles without introducers. But introducers have an advantage of keeping the needle straight and so preventing it from bending. Omission of introducer needle has decreased tissue damage and lessened PDPB incidence in some studies. We are in accordance with these facts and think that adding an introducer may stabilize the subarachnoid needle itself, decreasing redirections, thus resulting in less PDPB; for all that it can cause more PDPB as a result of being thicker than the subarachnoid needle itself and causing more trauma to the tissue.
Conclusion: Both 26-Gauge Quincke and Atraucan needles have excellent handling characteristics. PDPB seems to be less with 26-Gauge Quincke than with Atraucan needle.

3AP4-12

Incidence of post-dural puncture headache: two different fine gauge spinal needles of the same diameter

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Background and Goal of Study: The young obstetric population displays the highest rate of post-dural puncture headache (PDPH). The aim of this study was to compare two spinal needles with different bevel designs regarding undergoing elective cesarean delivery under spinal anesthesia were recruited in the study. Patients were divided into two groups as, Group A (n = 110) and Group Q (n = 110); who received spinal anesthesia via 26 gauge (26-G) atraumatic spinal needle (Atraucan®, B. Braun Melsunger, Germany) and via 26-G Quincke spinal needle (Spinocan®, B. Braun Melsunger, Germany), respectively. Procedure duration, puncture attempts and PDPH incidences were recorded. The costs of the spinal needles were also noted. Differences between categorical variables were evaluated with Chi-square test. Continuous variables were compared by Student's t-test for two independent groups.
Results and Discussion: Spinal block was established in a single attempt in one hundred and one patients (92.7%) in Group A and ninety-one patients (85.0%) in Group Q. The procedures of the spinal block were completed within 60 seconds in 93 (85.3%) and 78 (72.9%) of the patients in the Groups A and Q, respectively. There were no significant differences between the two groups in spinal puncture attempts and procedure durations. Similarly, incidence, severity, onset time and duration of headache were not found to be significantly different between the two groups. Ten patients (9.2%) in Group A and 11 (10.3%) in Group Q had developed PDPH. The rate of success at single attempt for spinal anesthesia puncture and duration of the procedure were best compared with the current literature. We attribute this to the experience of the operators. However, the rates of PDPH were one of the highests given in the current literature. Genetic factors might have been involved.
Conclusions: Both spinal needles offer good handling characteristics with comparable insignificant incidence of PDPH. Taking into account economic factors 26-G Quincke needle may be preferred to 26-G Atraucan®.
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3AP5-1

Comparison of two approaches of infraclavicular brachial plexus block for elbow surgery

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Background and Goal of Study: The infraclavicular block (ICB) had a high success rate and was as good as all other blocks in providing anesthesia of the lower arm, especially in elbow surgery where is required blockade of all the five nerves. Aim of this study was to compare two approaches of ICB: the vertical infraclavicular block (VICB) and the coracoid infraclavicular block (CICB) in terms of success rate, tourniquet tolerance and complications in patients scheduled for elbow surgery.
Materials and Methods: Forty eight patients, aged 18-78 yr, ASA I,II, requiring surgery in elbow were randomly assigned to receive nerve stimulator guided ICB either by VIC -Kilka approach (group V, n = 24) or CIC - Wilson approach (group C, n = 24). In both the groups, the block was performed using a nerve stimulator with an only puncture . After the evoked a distal motor response (radial or median) was obtained, at a current of 0.3-0.4 mA, an equally mixture of Lidokaine 2%-20ml and Bupivacaine 0.5%-20 ml was slowly injected through the needle. The sensory blocks were assessed for 30 min after performing the block. Blocks were considered successful if the procedure could be completed without any supplementation.The success rate, tourniquet tolerance and complications were assessed.
Results and Discussion: Successful block was observed in 100% and 91.7% patients in groups V and C, respectively ($p < 0.25$).Two patients in groups C required surgical infiltration by the surgeon Tourniquet was well tolerated in all patients . All surgeries were performed under ICB without any complications.
Conclusion(s): VICB represents a highly successful method compared to CICB in patients undergoing elbow surgery. Variations of the musculocutaneous nerve, which often leaves the lateral cord at or above the level of coracoid process, may be explained the cause of an incomplete block by coracoid approach
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