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The Effectiveness of The Blockade of The Transverse Abdominal Space In The Early Postoperative Period after Cesarean Section

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1. Case Report

Recently, active research has been conducted in the schemes of multimodal anesthesia of new methods of regional anesthesia based on myofascial blocks. Such blocks include the blockade of the transverse abdominal space (Transversus abdominis planet block - TAR). The advantage of this anesthesia is ease of implementation, low risk of complications, impact on the initial stages of pain syndrome, which provides a stress-limiting effect [1]. At the same time, the TAP block does not provide blockade of visceral nociceptive impulses, but significantly reduces the severity of the somatic component of pain. The somatic nerves of the anterior abdominal wall (ilio-submandibular and ilio-inguinal-L1) lie in the interfacial cellular space between the internal oblique and transverse abdominal muscles, where they can be blocked by the action of a local anesthetic [1]. It is obvious that the area of the suprapubic incision is completely within the responsibility of the dermatologist L1. The pain experienced after abdominal operations is due to a certain extent to the incision of the anterior abdominal wall, and therefore the evaluation of the effectiveness of TAP is of great practical importance [2]. The purpose of our study was to evaluate the effectiveness of TAP anesthesia after cesarean section. Material and methods of research: maternity hospitals after cesarean section. Women with unstable hemodynamics due to a pronounced degree of preeclampsia, with disorders of the hemostasis system and neurological symptoms due to impaired cerebral blood flow were excluded from the study. The first group of women (37 people) who, in the early postoperative period (2-3 hours after surgery), underwent TAP anesthesia under ultrasound navigation with solutions of ropivacaine or levobupivacaine from a 1 mg/kg woman's weight in combination with other anesthetics (paracetamol, promedol, ketoprofen). The second, a control group of women, 30 people who underwent standard anesthesia provided by clinical recommendations. Pain intensity was assessed 2 hours after surgery and 5-6 hours after surgery using a visually analog scale (VAS). The activation time of postoperative women and the time of discharge from the hospital were also taken into account. Statistical processing of the obtained results was carried out according to the Student's system with the determination of the indicator (P), the value of which less than 0.05 indicated a significant difference in the compared results.

2. The Results Obtained and Their Discussion

The average age of women in the studied groups of women did not significantly differ and amounted to 30.8±2.6 years in the first group and 29.6±3.2 years in the second group ($P \leq 0.05$). There were 13 (31.1%) first-time births in the first group, 24 (68.9%) repeat births. In the second group, respectively, 10 (33.3%) and 20 (66.7%) women. Full-term pregnancy in the first group was in 30 (81.1%) women and in 26 (86.7%) in the second group. Indications for surgery in the first group were a scar on the uterus in 21 (39.5%) women, anomalies of labor activity in 11 (25.6%) and clinically narrow pelvis in 5 (13.5%). In the second group of women, the indication for surgery was a scar on the uterus in 8 (26.7%) pregnant women, premature detachment of the normally located placenta in 6 (20%), CUT in 2 (6.7%), in the remaining women the

indications were complex (large fetus in breech presentation, progressive intrauterine fetal hypoxia, degenerative retinal changes, HIV infection, symphysiopathy, etc.) indications. The operation was of an emergency nature in 14 (37.8%) cases of the first group and in 11 (36.7%) in the second. All women were anesthetized by spinal anesthesia. The average duration of the operation and postoperative blood loss also practically did not differ and were respectively equal in the first group 38.3±3.2 min. and 305.5±58ml., in the second group: 43.8±2.7 min. and 335.3±87ml.(P≤0.05). The average fruit weight in the first group was 3255.2±347 g, and in the second group 3576±448 g. None of the observed cases showed severe fetal hypoxia at birth, and the average Apgar score at birth was 7.2±0.9 points in the first group of women and 7.4± 1.1 points in the second group. In the first group of women, postoperative anesthesia with promedol 2% was carried out in 11 (29.7%) people, ketoprofen in 27 (73%) and paracetamol in 21 (56.8%) maternity patients. A combination of these drugs was also used. Anesthesia with the use of these drugs in separate observations (5 cases) was carried out for no more than two days. TAP for the purpose of anesthesia was carried out 2-3 hours after the completion of the operation. In the second group of women, paracetamol was used in 3 (10%) women, ketoprofen in 10 (33.3%) and promedol in 9 (30%). At the same time, anesthesia with these drugs was carried out for 2-4 days. Within 3 days for 6 people and 4 days for two. The pain syndrome was assessed 2-3 hours after the end of the operation, before the TAP anesthesia in women of the first group and 6 hours after the completion of the operation. In all the women studied, 2 hours after the operation, the score on the VAS scale ranged from 7 to 9 points, and the average indicator did not significantly differ in both groups. 6 hours after the operation and the TAP anesthesia in the first group of women, the score on the VAS scale in the first group of maternity patients ranged from 2 to 3 points, averaging 2.4±0.5 points, while in the second group of women, the same score ranged from 7 to 8 points, averaging 7.2±0.6 points and significantly (P≤0.05) exceeded the indicator in the first group. When conditionally calculating the use of painkillers per person in the postoperative period, it was noted that 1.9 ampoules of piracetam, 1.2 ampoules of ketoprofen and 1.1 ampoules of promedol were conditionally spent per person in the first group. At the same time, in the second group of women, 2.4 ampoules of ketoprofen, 1.7 ampoules of promedol and 3 ampoules of piracetam were After the T AR, the patient was anesthetized after an hour, and after an average of 4.1 = 0.2 hours, they rose independently and began to walk. In the group of women who used only traditional methods of anesthesia, they rose independently and began to move actively on average 6.5 ± 0.4 hours after cesarean section. Thus, the use of TAP allows 1.6 times faster to start using the active mode, which is an essential factor in the prevention of postoperative complications. The discharge of postoperative patients in the first group of women was carried out on average for 4.1 ± 0.3 days of the postoperative period, while in the second group of women only for 5.5 ± 0.4 days, which significantly exceeded the same indicator in the first group of maternity women.

3. Conclusion

Thus, the use of multimodal anesthesia by the TAP method in the early postoperative period makes it possible to achieve a significant effect in increasing the effectiveness of anesthesia against the background of a significant decrease in medications of traditional methods of anesthesia, at earlier stages of the postoperative period to increase motor activity and reduce the stationary stay of maternity patients in the postoperative period.

Conclusions:

1. The use of TAP anesthesia dramatically increases the analgesic effect in the postoperative period after cesarean section.

2. TAP anesthesia can significantly reduce the use of traditional methods of anesthesia with a decrease in the volume of medications.

3. TAP anesthesia creates conditions for early activation of postoperative patients, which should undoubtedly contribute to reducing postoperative complications.

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