Conclusion. On this basis, we can conclude that the change in statistics is exogenous in the dynamics and epidemiological analysis requires more study in depth-of. The necessary is primarily a study of the dynamics of disease, its structure, factors that contribute to their development, as well as the impact of immunogenetic, immunomorphological features of the child’s body. The important values is the establishment of continuity in the work of primary health care (general practitioners and pediatricians) and oncology service in order to provide more accurate data to original sources and to improve diagnostic results and treatment of children with cancer.

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Assessment of the effectiveness and safety of epidural-sacral anesthesia during cesarean section

Abstract: Investigation was carried out with the aim to determine reasonability of using epidural-sacral anesthesia during cesarean section and also to assess the effectiveness of such method. 19 women with supposed difficulties of traditional methods of anesthesia have been included in the investigation. The implementation method of epidural-sacral anesthesia and also subsequent monitoring of patients’ health status have been described in detail. The results of investigation allow us to consider that this type of regional blockade on the assumption of its correct technical realization provides reliable antinociceptive defense and hemodynamic stability, limits neuro-endocrine reaction for the surgical aggression.

Keywords: epidural-sacral anesthesia, cesarean section, regional anesthesia.

Introduction. Continually growing temps of distribution of obesity in the world wide, and also connecting with obesity the increased morbidity and mortality have been made it one of the most actual problems of the modern health care, while the obesity of pregnant women has been attracted the most attention. In spite of the constant improvement of the system of antenatal observation and delivery system the amount of pregnant women with obesity in economically developed countries has been reached 15,5–26,9% and continually increased, in connection with it the actuality of this problem takes the particular importance [1].

According to the data of the world health care statistics the frequency cesarean sections in the USA increased from 20,7% in 1996 to 31,1% in 2006 and for the present time it is the most distributed surgical operation in women [2; 3; 4]. The generally accepted “gold standard” during anesthetic supplying of cesarean section considers central neuroaxial blockades (CNB).

Spinal and epidural anesthesia are generally accepted as the most rational methods of regional anesthesia during cesarean section [5; 6]. However in the certain contingent of patients (obesity, congenital and acquired deformations of spinal column, edema) their technical implementation is accompanied by considerable difficulties [7; 8; 9]. At the same time type of regional blockade called epidural-sacral anesthesia (ESA) technical implementation of which is not presented difficulties has already existed for a long time [10; 11]. For the present time this method is rather widely used in proctology, traumatology [12], and urology [10]. However in the operative obstetrics it has not found due acknowledgement probably because of the cesarean section requires highly extensive sensor-motor blockade on the level of lumbar and low thoracic segments of spinal cord.

ESA considers as a variant of epidural blockade since local anesthetics injected through sacral foramen is extended to the cranial direction and in the enough injected amount could reach low
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thoracic segments of spinal cord [10]. The effectiveness of ESA substantially increases during catheterization of the epidural cavity with carrying out catheter until L₄-L₅ levels. This tactic is guaranteed necessary before surgical operation level of sensor-motor blockade and to the considerable degree reduce the amount of local anesthetic in the comparison with single-stage injection through the needle [10; 13]. At the same time this method is not found a wide application in the obstetrical practice in connection with the limited amounts of investigations confirming its effectiveness and safety.

The aim of investigation. The assessment the effectiveness and safety of epidural-sacral anesthesia during anesthetic supplying of cesarean section.

Materials and methods of investigation. On the basis of Republican specialized scientific-practical medical center of obstetrics and gynecology together with the first clinic of Samarkand State Medical Institute for the period of 2015–2016 it has been carried out prospective investigation in which according to the inclusion criterion with the use of simple randomization 19 women with supposed technical difficulties of using traditional variants lumbar epidural (EA) and spinal anesthesia (SA) and also with accompanying obesity, congenital and acquired deformations of spinal cord have been selected. According to the conclusions of the adjacent specialists (neurosurgeons, traumatologists and therapeutics) 15 (78,9%) of investigated patients have got obesity of the 1–2 degree (body mass index was 30–39,9 kg/m²) and 4 (21,1%) patients have got deformation of the lumbar part of spinal cord. Pregnant women with the other extra genital pathology or conditions which potentially lead to the disorders of the function of the basic systems of life support have not been included in the investigation. Authors on the basis of clinical findings (thick subcutaneous fat, deformations of the lumbar part of spinal cord) and conclusions of the adjacent specialists were made conclusions about proposed difficulties on the performing of traditional variants of anesthesia. In connection with it ESA was chosen as an alternative method of CNB.

Introduction of this method of investigation was carried out by the authors themselves on the basis of center and clinic (certificate № 75 about the introduction of the results of scientific-research elaboration “Sacral-epidural anesthesia during delivery anesthetization of women with accompanying obesity” from November 5, 2015, duration of introduction 2015–2016 years).

Before surgical operation all women were examined by anesthesiologist and adjacent specialists and were informed about supposed anesthetic manual. We have received the information consent of patient with following official registration in the case history. In connection with it ESA was chosen as an alternative method of CNB.

Assessment of the effectiveness and safety of epidural-sacral anesthesia during cesarean section have been performed to all women of 37–39 weeks. Operations were carried out in the planned order in the postoperative period the placed in the epidural cavity catheter has been used for postoperative analgesia.

About the effectiveness of anesthesia we judged due to the generally accepted clinical signs. The level of sensor blockade has been assessed due to the loss of tactile sensitivity (test — «pin princt»). The upper border of blockade has been assessed after its stabilization. P. Bromage scale has been used for the assessment of the depth of motor blockade (DMB). With the aim of the assessment of ESA safety we have studied central hemodynamic by the method of echo-cardiography with the use of SA — 600 apparatus of “Medison” firm. Impact index (II), cardiac index (CI) general peripheral vascular resistance (GPRV), mean dynamic pressure (MDP), heart rate (HR) and saturation (SpO₂) have been studied and followed with the use of Schiller monitor. In order to assess reaction of neuro-vegetative system on ESA we have performed the study of tension index (TI) with using of mathematic analyses of cardiac rhythm [14]. Also for the study of adequacy of anesthesia we have determined the level of total cortisol (TC) in the blood plasma (radioimmunologic method) and due to excretion of noradrenalin (NA) with urine [15] for this. All numerical values received during investigation have been processed by the method of variation statistics with the use of Student’s criterion (by Microsoft Excel program) and presented in the form of M±m, where M — arithmetical mean value and m — standard error. Differences consider statistically reliable in р<0,05. Received results have been presented in table.

Results and their discussion. As our investigations showed that in 18 patients ESA was highly effective. The distribution level of full sensor-motor blockade is corresponded to the Тh₇-L₅ dermatomes. During the whole operation including of it’s the most traumatic stages patients were not reacted and presented complaints. Signs of depression were not observed. SpO₂ was 96–98%. Hemodynamic stability has been saved.

However in 1 our observer on the stage of extraction of infant from uterus and subsequent revision of the wound patient was presented complaints for moderate pains and unpleasant feelings which required additional anesthesia by parenteral injection of the minimal doses of ketamin (0.5 mg/kg). Subsequent stages of cesarean section have been passed normally. It should been noted that in the case of insufficient effectiveness of ESA epidural catheter we could lead only to L₄-L₅ level. At the same time, level of the full segmental sensor-motor blockade has been corresponded only to Th₉-S₃ dermatomes. Analyzing the technical side of ESA performing we should mention that epidural carrying out of the...
usual catheters could cause certain difficulties in the connection with its insufficient elasticity and stiffness. At the same time the movement of epidural catheters G16–G18 to the cranial direction is not caused any difficulties.

### Table 1. – Some indexes of hemodynamic, neurovegetative and hypothalamic–hypophysal–adrenocortical systems on the stages of anesthesia and surgical operation

<table>
<thead>
<tr>
<th>The studied parameters</th>
<th>Stages of investigation</th>
</tr>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Heart rate, in 1 minute</td>
<td>89,7±2,1</td>
</tr>
<tr>
<td>Mean dynamic pressure, mm Hg</td>
<td>92,4±1,9</td>
</tr>
<tr>
<td>Cardiac index, l/m²/min</td>
<td>2,075±0,09</td>
</tr>
<tr>
<td>General peripheral vascular resistance, din/cm²/s</td>
<td>1414,3±46,1</td>
</tr>
<tr>
<td>Impact index, in standard units</td>
<td>356,4±10,2</td>
</tr>
<tr>
<td>Total cortizol, nmol/l</td>
<td>398,4±36,3</td>
</tr>
<tr>
<td>Noradrenalin in urine, nmol/l</td>
<td>8,9±0,8</td>
</tr>
</tbody>
</table>

Footnote: * — reliability of differences (Р<0,05) concerning initial values; Δ — reliability of differences (Р<0,05) concerning previous stage of investigation. Stages: I — on the operation table; II — before beginning of operation; III — after skin incision; IV — traumatic stage of operation; V — end of operation.

In the all stages of anesthesia and operation hemodynamic stability has been remained (see table). Adequacy of anesthesia was confirmed by the absence of significant II and concentration of TC in the blood plasma in the traumatic stages of operation. So, concentrations of II and TC in the stage of extraction of infant from uterus and surgical revision were accordingly 381,3±10,8 standard unit and 719,4±46,6 mmol/l and were not overrun ”stress-norm”. Concentration of NA in the urine during operation period has been increased till 11,4±1,4 mmol/l. At the same time NA excretion speed with urine was not reliably differed from this index before operation.

The above mentioned is testified about the moderate significance of sympathetic-adrenal and hypothalamus–hypothalamic–adrenocortical systems on the operational wound confirming the effectiveness of the approved method of regional blockade. We were not observed complications connected with the use of ESA. Postoperative epidural analgesia supplied fluent duration of the nearest postoperative period and promoted and curtailment of terms of rehabilitation.

Thus, our experience of using ESA in the combination with preventive analgesia has been testified about its high effectiveness and safety. The presented data allows us to recommend ESA for the anesthesia of cesarean section concerning patients with proposed difficulties of puncture — catheterization of subarachnoid and epidural cavities.

**Conclusions:**

1. ESA in the combination with preventive analgesia can be used for the anesthesia of cesarean section concerning patients with proposed difficulties in carrying out of traditional types of blockades of central nervous system.

2. The investigated type of regional blockade on the assumption of correct performing supplies reliable antinociceptive defense and hemodynamic stability also restricts neuro-endocrine reaction for the surgical aggression.

References:

Comparative age features of clinic and pathogenetic aspects of school disadaptation

Abstract: The clinic manifestations and the main factors of pathogenesis of school disadaptation in the comparative-age aspect (7–11 years old, n = 950) and (12–17 years old, n = 550). More significant factors of risk together with the psycho — social ones (conditions of micro social sphere of family and school) are genetic and cerebral organic. The feature of found out on by children and teenagers disadaptation is its massive somatisation, which characterised by polymorph vegetative and visceral disorders in different organs and systems (digestive, skin, respiratory, moving, heart-vessel, secretory, endocrine) and painful manifestation.

Keywords: school disadaptation, factors of risk, somatisation.

School period of life is considered by most authors as a very special, very important period of human life, have a great influence on the formation of the body [1, 3, 4, 5]. Intensive processes of maturation of certain biological systems of the body in conjunction with an increase in the level of socio-psychological requirements for students, increase the possibility of psychotraumatik personality. These biological and psychological characteristics of a certain effect on the prevalence and clinical manifestations disadaptation (crisis) disorders in this age group. All this creates conditions for a possible formation and manifestation of abnormally personal characteristics, which does not rule out further genesis clinic border states and increases the likelihood of neuropsychiatric and somatic diseases [2, 6]. "School maladjustment" — a violation of the individual student adaptation to the school environment, which acts as a private phenomenon of disorder in the child’s overall ability to adapt in connection with any pathological factors N. V. Vostroknutov [4].

Purpose a comparative study of age-related clinical manifestations and pathogenesis of the main factors of school exclusion [4].

Material and methods

The main methods of investigation were clinical-epidemiological and psychological. Additionally used psychopathological, paraclinic and catamnesia methods. Observation of children with impaired adaptation we carried out in conditions of children's clinics and psycho-neurological clinic (7–11 years, n=950) and (12–17 years, n=550).

Results and discussion

Fully taped maladjustment in children 12–17 years of 29.6 ± 3.58%; P> 0.05 (22.4 and 36.0% of boys and girls) than in younger schoolboys 22 ± 3.8%; (16.5 and 28.1% respectively in girls and boys). This ratio is celebrated and II degree maladjustment (14.5 and 25.6%, 10.4 and 19.4%, P> 0.05, respectively, in girls and boys) in the age periods 12–17 and 7–11 years. In 72.7% of girls and 52.5% of boys aged 7–11 years and 63.1% of girls and 38.4% of boys aged 12–17 with maladjustment infringements of only one of the 3 parameters.

Thus, much more often than in children (15.7 ± 1.18%), among school-age adolescents (29.4 ± 1.9%; P <0.001) found violations of adaptation. The degree of response and the quality of mental and emotional changes Profile depend on the age of the subjects. So, boys and girls aged 7–11 years of mental and emotional changes in the background significantly marked decrease in impu-nitive "M" orientation reaction (20.4 ± 5.11; P <0.01). In general, the observed increase in reduction of tolerance to frustration, which is manifested by increased ekstrapunitive indicator "E" reactions (48.65 ± 6.34) and the reaction needs to continue, "I-R" (44.45 ± 6.31; P <0.05). In adolescents, students with maladjustment reaction ratio between the types of reactions and their direction abruptly broken.

It is stated significant increase ekstrapunitive "E" self-protective reactions of the type (58.25 ± 3.5; P <0.05) when compared with the children of 7–11 years and compared to children 12–17 years of healthy population. It is also a marked trend of increasing demand indicator reaction continued, "I-1-R" (21.75 ± 2.98; P <0.001). Reactions on the "O-D" type (21.95 ± 2.99; P <0.01) — domination of the obstacle is reduced in comparison with the healthy population. The findings suggest that a stressful situation with students maladjustment likely to respond to the aggression of others, excessive self-defense, and their emotional reactions differ inadequate. Low "On-D" in both age groups (19.2 ± 5.0 and 21.95 ± 2.99; P <0.001) 7–11 and 12–17 years shows a decline in severity and self-esteem. Obstacles caused by frustration, children assessed as having significant value or children looking for the source of conflict outside of yourself. Significantly