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Cesarean Section and Spinal Anesthesia in Clinical Hospital Shtip

Biljana Eftimova,Clinical Hospital-Shtip,Faculty of Medical Science,University Goce Delchev,Shtip,R.of Macedonia

Biljana Lazarova,Clinical Hospital Shtip,Faculty of MedicalScience-University Goce Delchev-Shtip,R.of Macedonia

Aleksandra Eftimova,Resident,University Clinic of Cardiology-Clinical Center-Skopje,R.of Macedonia

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ABSTRACT: Anesthetics approach to Caesarean section has considerably changed during last decades . The changes are primarily related to the choice of anesthesia, so that the percentage of Cesarean section performed under general anesthesia is in a steady decline with a simultaneous significant increase in Cesarean section performed under spinal anesthesia

The choice of anesthesia for Cesarean delivery depends on the indication for the surgery, the degree of emergency and affinities of pregnant woman. It implies that proposed method of anesthesia provides good operating conditions and that is safer for both mother and child. Advances of regional – spinal anesthesia to general anesthesia are: greater safety of mother and child, consciousness of mother during birth, better postoperative analgesia and earlier mobilization of mother.

In last decade the number of Cesarean section performed in Clinical Hospital in Stip has been constantly increasing. This trend has enabled us to fully affirm spinal anesthesia as the method of choice for Cesarean delivery in our hospital.These results indicate that spinal anesthesia has become the method of choice in our hospital and is performed in almost 90% of patients who went under Cesarean section. It has also become the method of choice in an emergency Cesarean section .

Aim: To find out the most preferred and frequent anesthetic technique for both elective and emergency cesarean sections in Clinical Hospital-Stip.

Methods: In our paper we include 1126 patients for elective and emergency C.section from January 2016 to July 2019.

Results: We include elective and emergency C.sections. Spinal anesthesia was the commonest technique used for C section both for emergency and elective cases . There was no significant difference regarding the minimum or maximum ages of patients coming for elective and emergency cesarean sections.

Conclusion: The most, preferred and convenient anaesthetic technique for cesarean section is the

The results of this study didn't determine any clinically significant differences in objective and subjective indicators of quality of spinal anesthesia for Cesarean section in elective and emergency regime. Urgent Cesarean section performed under spinal anesthesia is confirmed as safe and reliable method of anesthesia with recommendation to follow pre and intraoperative volume optimization protocol and application of vasopressors. So we recommend spinal anesthesia as the method of choice, not just as an alternative to general anesthesia for the large number of emergency Cesarean section

KEY WORDS: Cesarean Section,Spinal anesthesia,elctive SC,emergency SC

I. INTRODUCTION

Since 1985, the international healthcare community has considered the ideal rate for caesarean sections to be between 10% and 15%. Since then, caesarean sections have become increasingly common in both developed and developing countries. When medically justified, a caesarean section can effectively prevent maternal and perinatal mortality and morbidity. However, there is no evidence showing the benefits of caesarean delivery for women or infants who do not require the procedure. As with any surgery, caesarean sections are associated with short and long term risk which can extend many years beyond the current delivery and affect the health of the woman, her child, and future pregnancies. These risks are higher in women with limited access to comprehensive obstetric care.

In recent years, governments and clinicians have expressed concern about the rise in the numbers of caesarean section births and the potential negative consequences for maternal and infant health. In addition, the international community has increasingly referenced the need to revisit the 1985 recommended rate. The reasons for

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this increase are multifactorial and not well-understood. Changes in maternal characteristics and professional practice styles, increasing malpractice pressure, as well as economic, organizational, social and cultural factors have all been implicated in this trend. Additional concerns and controversies surrounding CS include inequities in the use of the procedure, not only between countries but also within countries and the costs that unnecessary caesarean sections impose on financially stretched health systems

WHO proposed in 2015 the use of the Robson Classification system as a global standard for assessing, monitoring and comparing CS rates and its use has increased spontaneously worldwide over the last decade.

This classification allows analyses of CS rates according to important maternal and fetal variables (e.g. parity, previous CS delivery, onset of labour, gestational age, number of foetuses and presentation) which can help to understand differences in obstetric populations (case-mix) and CS rates per groups between facilities or regions and over time.

Current rates of CS, except for the least developed countries, are consistently higher than what is considered medically justifiable .

The scientific, public health and medical community have raised concern about this global epidemic while the search for ideas and interventions to reduce unnecessary CS is on-going.

However, the rational and responsible reduction of unnecessary CS is not a trivial task and it will take considerable time and efforts.

On the other hand and anaesthetics approach to Caesarean section has considerably changed during last decades .

The changes are primarily related to the choice of anaesthesia, so that the percentage of Caesarean section performed under general anaesthesia is in a steady decline with a simultaneous significant increase in Caesarean section performed under spinal anaesthesia.

For example, in USA in year 1981. over 40% of Caesarean section were performed under general anaesthesia compared to 17% in 1992.

What is the main reason for these changes?

Above all, maternal safety. Considering that 3 to 12% of total maternal mortality is accountable to anesthesia, and the vast majority of such cases occur during general anesthesia (failed intubation, inability to ventilate, aspiration of gastric content into the lungs, etc.), most anesthesiologists recommend regional – spinal anesthesia whenever possible, and general anesthesia only when absolutely necessary.

When it comes to neonatal safety most studies assert that Apgar score after first minute is higher when Cesarean section is performed under spinal than in general anesthesia

The choice of anaesthesia for Caesarean delivery depends on the indication for the surgery, the degree of emergency and affinities of pregnant woman. It implies that proposed method of anaesthesia provides good operating conditions and that is safer for both mother and child.

Advances of regional – spinal anaesthesia to general anaesthesia are:

1.	greater safety of mother and child,
2	greater safety of mother and child,
3	better postoperative analgesia
4.	earlier mobilization of mother

In our beginnings, by introducing spinal anaesthesia for Caesarean section in our hospital , with a lack of understanding and resistance of obstetricians, nevertheless we managed to perform 25% Caesarean section under spinal anaesthesia .

In last decade the number of Caesarean section performed in Clinical Hospital in Stip has been constantly increasing.

Today, spinal anaesthesia as the method for Caesarean delivery in our hospital is performed in almost more than 95-98% of patients who went under Caesarean section.

II. METHODS

Our study included all cases who had Caesarean section during the calendar years 2016,2017,2018 and half 2019 year in regular operating program and as emergency operation. There were no excluded subjects.

year	No. of deliveries	Cesarean Section	percentage
2016	917	260	28%
2017	929	299	32%

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2018	878	364	41.4%
2019/7 months	418	203	48.56%

In our study we include 1126 patients for elective and emergency C-section.

III. RESULTS

In all cases ,Spinal anaesthesia was the commonest technique used for both - emergency and elective cases . There was no significant difference regarding the minimum or maximum ages of patients coming for elective and emergency caesarean sections.

year	CS	Spinal an.	SA+GA	GA	Percentage
2016	260	250	5	5	4% ga
2017	299	286	2	11	4.5% ga
2018	364	357	6	2	2.2% ga
2019/7months	203	198	4	1	2.5% ga

So we can say that from all C-saction,95-98% was performed with SA and only 2-4,5% with GA or combine SA+GA

We have analyzed the objective and subjective indicators of quality of spinal anesthesia for scheduled and urgent Cesarean section and Cesarean delivery.

We analyzed the hemodynamic parameters of our patients and the necessity to administer colloids and vasopressors due to hypotension induced by spinal anesthesia and the need for the addition of analgesics and / or sedatives for unsatisfactory subarachnoid block.

We have processed the information about the most common indications for Cesarean section, puncture site, the volume of local anesthetic, additives, preloading, and the total volume of crystalloids and the baseline hemodynamic parameters and values of blood pressure and pulse rate after 5 and 15 minutes from the initiation of subarachnoid block.

IV. CONCLUSION

In last decade the number of Caesarean section performed in Clinical hospital in Stip has been constantly increasing. This trend has enabled us to fully affirm spinal anaesthesia as the method of choice for Caesarean delivery in our hospital.

Until a decades ago, spinal anaesthesia was merely an alternative to general anaesthesia and was only administered only in some specific cases, when GA was contraindicated.

But these results indicate that spinal anaesthesia has become the method of choice in our hospital and is performed in almost 95-98% of patients who went under Caesarean section.

The results of this study didn't determine any clinically significant differences in objective and subjective indicators of quality of spinal anaesthesia for Caesarean section in elective and emergency regime.

Urgent Caesarean section performed under spinal anaesthesia is confirmed as safe and reliable method of anaesthesia with recommendation to follow pre and intraoperative volume optimization protocol and application of vasopressors.

So ,from our experience, we recommend spinal anaesthesia as the method of choice, not just as an alternative to general anaesthesia for the large number of emergency Caesarean section .

Our aim was to show that after years of performing, we affirmed subarachnoid block-spinal anaesthesia as a safe, efficient and reliable method of anaesthesia for Caesarean section in Clinical Hospital in Stip.

We can say that this is similar with a simultaneous significant increase in Caesarean section performed under spinal anaesthesia in developed countries.

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