THE INCIDENCE OF CAESAREAN SECTIONS IN THE UNIVERSITY CLINICAL CENTER OF KOSOVO

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1. INTRODUCTION
Over several decades, has come to a dramatic increase in the number of Caesarean sections performed across the world, especially in developed countries (1,2). The frequency of Caesarean section increased from 5% to 15%. However, the rate of births by Caesarean section still varies significantly in different countries and regions, in different hospitals, by the various factors such as social and economic health or individual factors, partly due to different perceptions of health workers and pregnant women about the benefits and risks of Caesarean section (3,4,5,6,7). Today, the frequency of completed births by caesarean section differs in different countries. According to statistics, it is highest in the U.S. or around 24%, and then in Canada about 20%, in Denmark about 13%, 10% in England and it is lowest in Japan – 7% (3). According to the United States Department of Health and Human Services, Healthy People 2000, the annual birth rate by Caesarean section should be reduced to less than 15% and frequencies higher than 12% of Caesarean section is not positive, since the frequency of Caesarean section, generally does not contribute to reducing perinatal mortality. In some centers perinatal mortality has been reduced by 50% without increasing the frequency of Caesarean sections, but only by neonatal intensive care setting (1,5,6).

Progress in surgery, anesthesia and transfusion has made relatively safe Caesarean sections, so it is often chosen as elective option for delivery (1,4,9,10,11,12,13,14,15,16,17,18,19). Historically, the majority of Caesarean sections are done because of obstetric complications or diseases (20,21,22).

Caesarean section is performed in cases where vaginal birth is either impossible or would pre-dispose mother and fetus with risks. Some indications are clear and absolute (e.g. placenta previa, the disproportionate cephalopelvic), others are relative. In many cases is required a difficult decision to determine if Caesarean section or vaginal birth would be the best option. It is impossible to prepare a complete list of indications for Caesarean section, because there are plenty of obstetric complications that are resolved with the section. However, the most common indications are:

a) Absolute indications: involves absolute pelvic narrowness, abnormalities and other diseases of the genitals and the neighboring organs, situs transversus, centralis previae placenta, uteri rupture imminens, placenta abruptio (severe cases), pre eclampsia, fulminate eclampsia, previous Cesarean section.
and vulvovaginal herpes (23, 24, 25, 26, 27, 28).

b) Relative indications: disproportion fetopelvinea (after birth proba-
tion), placenta previa mar-
ginalis, lateralis (30%),
circumvallata, pelvis os-
temalasica, EPH gesto-
tosis, IUGR, acute fetal
distress, diabetes mellitus
according to White cl. BF,
Aloimunismus, lien mul-
tiple fetuses with patho-
losis, IUGR, acute fetal
tation ankylosis of the
terus, hydrocephalus,
circumvallata, pelvis os-
and vulvovaginal herpes
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according to White cl. BF,
Aloimunismus, lien mul-
tiple fetuses with patho-
losis, IUGR, acute fetal
tation ankylosis of the

c) Extended indications: Abruptio placentae partials, presentation,
pelvinae, twin pregnan-
cies, infertilit, sectio ier-
itive, mioma, diabetes,
pre eclampsia, hyperten-
sion, fetus weight of >3800
grams, a RAR >12h, IUGR
etc. deflexive positions
of the head and rotation
anomalies, prolapsed um-
bilical cord, vasa praevia,
cicatrizes the uterus after
caesarean section articu-
lation ankylosis of the
pelvis, hydrocephalus,
hydrops and vulvovaginal herpes
(23, 24, 25, 26, 27, 28).

2. GOAL

The main purpose of this paper is to outline the incidence of Caesarean sections at
Gynecology and Obstetrics clinic of University Clinical Centre of Kosovo in
Prishtina.

Also other purposes of this re-
search are investigate:
• The most common indications
for caesarean section;
• The most common intraopera-
tive and postoperative complica-
tions.

3. MATERIAL AND METHODS

This study is retrospective which involved two groups of patients.

a) Analyzed all cases of preg-
nant women deaths during or after
Caesarean section recorded at the
Gynecology and Obstetrics clinic in
Prishtina for the period 2000-2006.

b) By performing random stratifi-
cation by year is selected sample
of 84 patients, where the birth was
completed by Caesarean section that
has not ended in death.

Data on deaths besides the Gy-
ecology and Obstetrics clinic were
taken from the Intensive Treatment
Unit of Central Morgue Clinical Centre and the Institute of Patho-
logical Anatomy.

The results are presented in ta-
bles and charts. Statistical param-
eters are computed from the index
of structure, mean, standard devia-
tion, while the testing of the results
is made with Student’s t-test and X2–
test. Verification testing is done az
the degree of p<0.05 and p<0.01.

4. RESULTS

In Maternity hospitals, Public
health institutions in Kosovo for the
period 2000-2006 were registered
234385 births. The highest number
of births was registered in 2000 - 39091 births, while the smallest
28404 in 2006. During this period
were registered 26317 (11.2%) births
by Caesarean section. Rate of births
by Caesarean section has increased
from year to year, in 2000 was 7.5% and in 2006 - 16.4%. On the basis of
calculating the base index in 2006
compared with 2000 the number of births by Caesarean section in-
creased by 59%. Largest increase in
the number of Caesarean section as compared with the previous year
we have recorded in 2001 when we
had increase of 22.5% (ordinal index 122.5) (Table 1).

Increase in number of Caesarean
sections is presented in Diagram 1.

Gynecology and Obstetrics clinic
in Prishtina as the only tertiary level
institutions in Kosovo during this
period was overwhelmed with
patients, either due to lack of sec-
care hospital in Pristina as

As shown in Table 3 the
Gynecology and Obstetrics clinic
in Prishtina for the period 2000-2006.

![Diagram](attachment:0)

**Diagram 1. Rate of caesarean sections in Kosovo in the period 2000-2006**

[Table 1, Table 2, Table 3]
The incidence of Caesarean sections in the University Clinical Center of Kosovo

<table>
<thead>
<tr>
<th>Year</th>
<th>Total deliveries by Caesarean section</th>
<th>Dead patients</th>
<th>Letalitet in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1832</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>2001</td>
<td>1975</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>2002</td>
<td>2044</td>
<td>3*</td>
<td>1.0</td>
</tr>
<tr>
<td>2003</td>
<td>1934</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2004</td>
<td>2000</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>2005</td>
<td>2073</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td>2006</td>
<td>2433</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>total</td>
<td>14291</td>
<td>14</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Table 4. Maternal mortality during or after caesarean section in Gynecology and Obstetrics clinic in Prishtina in the period 2000-2006

Table 5. Indications for Caesarean section

Diagram 2. Rate of caesarean births in Gynecology and Obstetrics clinic in Prishtina during the period 2000-2006

Section at Gynecology and Obstetrics clinic has been increasing from year to year, in 2000 it was 14.5% whereas in 2006 - 22.7%. On the basis of calculating the index base year 2006 as compared to year 2000 the number of births by caesarean section increased 32.8%. Largest increase in the number of caesarean section compared with the previous year we had in 2006 - 17.4% (117.4 ordinal index), while only in 2003 we had a decrease in the number of births by Cesarean section compared to the preceding year (year 2002) to 5.4% (ordinal index 94.6).

In Diagram 2 is presented the birth rate with Cesarean section at Gynecology and Obstetrics clinic in Prishtina during period of 2000 to 2006. Diagram shows the incidence trend in the rate of births by Cesarean section.

For the period 2000-2006 at Gynecology and Obstetrics clinic in Prishtina was recorded 14 maternal deaths during or after Caesarean section. In the years 2000, 2001, 2002 and 2005 were recorded three maternal deaths, in 2004 two and in 2003 and 2006 no cases of maternal death in the group of mothers who died, two thirds had PIH as indication of a third syndrome and eclampsia or pre-eclampsia. In the group control there was no cases with eclampsia or pre-eclampsia (Table 5).

5. DISCUSSION

Over several decades, has come to a dramatic increase in the number of Caesarean sections taken across the world, especially in developed countries (1,2). The frequency of Caesarean sections increased from 5% to 15%. In maternity hospitals, public health institutions in Kosovo for the period 2000-2006 were registered 234 385 births. The highest number of births was registered in 2000 - 39091 births, while the smallest - 28404 in 2006. During this period 263 17 births were completed by Caesarean sections or the average rate of caesarean section rate was 11.2%. Rate of Caesarean births has increased from year to year; in 2000 it was 7.5% and 16.4% in 2006.

Today, the frequency of completing the birth by Caesarean section differs in different countries. According to statistics, the highest rate is in the U.S. - around 24%, then in Canada - about 20%, in Denmark about 13%, 10% in England and it is lowest in Japan – 7% (3, 22, 23).

According to the United States Department of Health and Human Services, Healthy people 2000, annual percentage rate of births by Caesarean section should be reduced to less than 15% and frequencies higher than 12% of caesarean section are not recommended, as the frequency increase does not contribute to reducing perinatal mortality (1, 5, 6, 15, 20).
In some centers has been reduced perinatal mortality by 50% without increasing the frequency of Caesarean section, only by setting neonatal intensive care (12,22).

Progress in Surgery, Anesthesiology and transfusion has made relatively safe Caesarean sections, so it is often chosen as elective option for delivery (1,4,12,19). Historically, most deliveries are made by Caesarean section due to obstetric complications or diseases (22).

According to the Sultan and Stanton suggestion that every pregnant woman has the right to request that her child is born with Caesarean section rises emotional and controversial issues. Jonson and associate in 1986 found that 10% of obstetricians would perform Caesarean section only because pregnant women wanted it, without any indication and that this percentage has grown more in recent years.

According to Francome and associates during last years women are likely to undergo caesarean section three times more than 20 years ago. This is attributed to many factors, not only improving the surgical technique and anaesthesia, but also the fear of judgment (30,33).

Helmsinski (1997) (31) notes that some pregnant women feeling that Caesarean section is “the best way to give birth to a child”. This is a view that is created by some obstetricians.

Caesarean section is followed by morbidity and increased maternal and neonatal mortality, followed also with increase of costs of health care.

Although a rare phenomenon that pregnant women in developing countries die as consequences of Caesarean section, new research conducted in France showed that Caesarean section triples the risk of maternal death compared with vaginal birth. These data are from the study led by Dr. Catherine Deneux (30) at Thareux Maternal Tenon Hospital in Paris in September 2006 and published in the journal “Obstetrics & Gynecology.” The author emphasizes that there is a steady increase in the rate of birth by caesarean section in developed countries and that some professionals propose Caesarean section as first choice for the birth of normal pregnancy, but pregnant with the increase of risk for maternal death should be account of the clinician and pregnant when risk is balanced and benefits of vaginal delivery compared with the one of Caesarian (33). At global level the most common causes of maternal death are direct bleeding in pregnancy, birth and after birth, infections, the consequences of unsafe abortion, hypertension in pregnancy and births obstructions (1,3,15,19,23,24,25,26,27).

Caesarean section is performed in cases where vaginal birth is either impossible or would pre-dispose mother and fetus with risks. Some indications are clear and absolute (such as placenta previa, the disproportionate cephalopelvic), others are relative.

However, the most frequent indications were: disproportion cephalopelvic, no dominance inertia of the uterus, placenta previa, premature come off of placetas with normal insertion, distotic appearance, preclampsia, eclampsia, prolapso of umbilical cord, diabetes, eritroblastosys and other dangerous situations, fetal suffocation, cervical carcinoma, cervical distocia, tumors of birth canal, the vaginal plastic surgery performed earlier, the genital herpes, severe heart disease and other debilitating conditions, in which vaginal birth would bring greater risks than cutting sections.

Indications for cesarean section at Clinic of Gynecology and Obstetrics in Prishtina are similar to data of other authors. Most patients included in the survey had more than one indication for Caesarean section.

The most common indication is PIH syndrome with 33.7% participation and previous Caesarean section with 32.7% participation. Then with the participation of 12.2% are abruptio placent and feto disporportion pelvinea, 11.2% placenta praevia pelvinea presentation in 10.2% parturions while other indications are much rarer with participation below 10%. So, the five most frequent indications are: PIH syndrome, previous Caesarean section, abruptio the placenta, disproportion feto-pelvina and placenta previa.

Maternal morbidity is also increased for births by Cesarean section. Postoperative complications like wound infection, pain, uterine infections, deep venous thrombosis, pyrexia, the need for urinary catheter and blood transfusion are quite frequent. Thus, only 9.5% of women with Caesarean section in Hilton’s research had no post-surgical complications. Long term problems can include forming adhesions, intestinal obstruction, urinary bladder damage and increased risk for acute placenta, dehiscence the suture in future pregnancies. Caesarian section also causes psychosocial complications as a longer stay in hospital on that occasion the woman is separated from family and other children, separation from the newborn, then she has a sense of “being sick”, which also affects the lack of desire for breastfeeding the baby.

According to complications during surgery, 34.7% of patients included in our survey have had complications. Complications by type were different between the two groups. The patients with lethal outcome had 2 complications where it should be hysterectomies - total subtotal 3 cases; two cases have hemorrhagic shock during the surgery and 3 cases with profuse metrorragy. In the control group, type the number of complications was much smaller.

Several authors published in literature presents facts that neonatal morbidity is increased by performing birth by Caesarean section, caused by respiratory distress syndrome and as tachypnea. This risk is higher for births before 39 weeks of gestation. Also during delivery by Cesarean section baby can be cut with a scalpel and dislocation of joints can occur.

Based on this we can conclude that the birth by Cesarean section have high risk.

Conflict of interest: none declared

REFERENCES


27. Definitions and Indicators, Essential Newborn care and Breastfeeding, World Health Organisation Regional Office for Europe and UNICEF.


