# Primary Caesarian Section in El-Obeid Town, West of Sudan

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**Abstract:** The name caesarian section or caesarian delivery, means surgical removal of a fetus from the uterus, through abdominal and uterine incisions, following the completion of 28 weeks of pregnancy. It is called primary caesarian section when it is done for the first time. Though caesarian delivery is associated with increased risk of maternal and neonatal morbidity and mortality compared to vaginal birth. **The Objectives of the study were** to review current incidence, indications and outcome of primary caesarian section. To calculate incidence of primary caesarian section in El-Obeid , West of Sudan. To analyze indications for primary caesarian section and to evaluate the fetal and maternal outcome following the operation. **The methodology** was a prospective descriptive hospital-based study, conducted in El-Obeid Town among pregnant ladies undergoing primary caesarian section in the main four Hospitals, which are El-Obeid Maternity Hospital, Police Hospital , Kordofan Specialized Hospital and El-Obeid Military Hospital. The study involved all pregnant ladies booked for primary caesarian section in the four hospitals during the period first of July to 31st December 2013.**The results** showed that the number of cases who had a primary C/S were 612. Total number of life -birth deliveries were 4212 and incidence of primary C/S was 14.5 %. The indication were failure to progress 269 cases (43.9%) , fetal distress 98 cases (16%) , breech presentation 72 cases (11.8%) , pre-eclampsia /eclampsia 50 cases (8.2%) , abnormal lie and presentation 40 cases (6.6%) , flailed induction of labor 35 cases (5.7%) , antepartum hemorrhage 34 cases (5.6%) , maternal request 7 cases (1.1%) ,and other indications 7 cases (1.1%). Three hundreds of the cases were primiparae .The operation was an elective procedure in 362 cases (59.15%) . Spinal anesthesia was used in 576 cases (94.1%) , general anesthesia in 32 and only 4 cases with local infiltration . Average hospital stay was 3.5± 2.1 days. Neonatal adverse outcome was encountered in 55 of the deliveries (9.0%). Maternal morbidity occurred in 50 cases (8.2 %).**Conclusion:** The study provided important data which can help in formulation of

Recommendations to reduce the rate of primary C/S as well as morbidities. The main maternal complications were found to be postpartum haemorrhage and sepsis, while fetal complications were found to be poor Apgar score, still birth, preterm labour and CMF.

**Keywords*: Primary caesarian section, incidence, indications, outcome, Sudan.***

## INTRODUCTION:

Caesarian section is the surgical procedure which is carried to deliver a baby from its mother's uterus through an abdominal and uterine incisions. Caesarean delivery has been practiced since antiquity, though it was first practiced as the method of choice when vaginal

delivery proves to be impossible . Until the advent of save anesthesia , antibiotics and blood bank services in the late 19th century the outcome was extremely poor for mother and baby.(1) Caesarean section is usually performed when vaginal delivery carries risk to maternal and fetal lives(2) .Cesarean birth can be life-saving for the mother, the fetus. However, the rapid increase in cesarean birth rates from 1996 to 2011 without clear evidence of concomitant decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean delivery is overused. (1) Despite the fact that caesarian delivery is associated with increased risk of adverse outcome for both mother and newborn baby , the rates of caesarian delivery are rising worldwide, table (1) .

**Table (1):**
**Risk of Adverse Maternal and Neonatal Outcomes by Mode of Delivery**

| Outcome | Risk | |
|---|---|---|
| | Vaginal delivery | Caesarian delivery |
| Overall severe morbidity(5) | 8.6% | 9.2%(4) |
| and mortality (5) | 0.9% | 2.7%(6) |
| Maternal mortality(7) | 3.6:100000 | 13.3:100000 |
| Amniotic fluid embolism(7) | 3.3–7.7:100,000 | 15.8:100,000 |
| Third-degree or fourth-degree perineal laceration(4) | 1.0–3.0% | NA (scheduled delivery) |
| Neonatal Laceration(8) | NA | 1.0–2.0% |
| Neonatal Respiratory morbidity (8) | < 1.0% | 1.0–4.0% (without labor) |
| Shoulder dystocia | 1.0–2.0% | 0.0% |
| Placental abnormalities(9) | Increased with prior cesarean delivery versus vaginal delivery, and risk continues to increase with each subsequent cesarean delivery. | |
| Urinary incontinence(10) | No difference between cesarean delivery and vaginal delivery at 2 years. | |
| Postpartum depression | No difference between cesarean delivery and vaginal delivery. | |

**Objectives:**
**General objective:** To review current indication, incidence and outcome of Primary C/S in El-Obeid town from July to Dec 2013.

**Specific objectives:**
1. To calculate the incidence of primary C/S
2. To verify and analyze the indications of primary C/S
3. To evaluate the maternal and fetal outcome of primary C/S

**METHODOLOGY:**

A prospective descriptive hospital-based study of primary C/S carried out in El-Obeid Town. All patients who had primary caesarian section in the 4 hospitals in El-Obeid in the study period were included. The hospitals where the study was conducted provide antenatal, intra-natal and postnatal services for patients as public and on private basis . Those hospitals were, El-Obeid Maternity Hospital, Kordofan Specialized Clinic, El-Obeid Police Hospital and El-Obeid Military Hospital. All patients were interviewed at the time of admission and other required data was looked for in the patients' records. Data was analyzed using SSPS.

**RESULTS:**

Total number of primary C/S included in this study was 612. They were distributed among the four hospitals as shown in table (1).

Table (1) : Distribution of primary C/S operations by hospitals .

| Hospital | Frequency | Percentage |
|---|---|---|
| El-Obeid Maternity Hospital | 419 | 68.46% |
| Kordofan Specialized clinic | 90 | 14.70% |
| El-Obeid Military Hospital | 37 | 6.04% |
| El-Obeid Police Hospital | 66 | 10.78% |
| Total | 612 | 100% |

Their mean age was found to be 25.7 year. Three hundreds of the cases were primiparae and 132 of them were grandmultiparae .Patients who had the operation as an elective procedure were 340 ( 55.6%) and those who were delivered as an emergency procedure were 272 ( 44.4%). Spinal anesthesia was used in 576 (94.11%), general anesthesia in 32 and local anesthesia in four of the cases. Failure to progress was the indication in 269 cases (43.9%). Fetal distress as an indication was mentioned in 98 (16%) , breech presentation in 72 ( 11.8%) , pre – eclampsia and eclampsia in 50 (8.2%), while ante-partum haemorrhage in 34 (5.6%) of the cases . Post-operative complications were encountered in 50 (8.2%) of the mothers and two of them died. Adverse fetal outcome occurred in 55 (9%) of the deliveries. Poor Apgar score was recorded in 27 (4.4%) , stillborn babies were 12 (1.96%), apparent congenital malformations were seen in six of the neonates. With statistically significant association between adverse fetal outcome and emergency C/S (P value = 0.005).

**DISCUSSION**

As it was shown in the results of the study that the incidence of primary C/S is 14.5%. The incidence of primary C/S in El-Obeid is not that high compared the incidence in USA and Canada 24% and 20 % respectively [15, 16]

The indications for primary C/S were mostly, failure to progress, fetal distress and breech presentation. Failure to progress in labour is easy to diagnose using a partogram. Treatment and correction depends mainly on the underlying cause. Good and adequate progress in labour depends mainly on the combination of the three factors power, passage and passenger. In the case when the problem is power which refers to adequate uterine contractions the problem can successfully be corrected using oxytocics and similar drugs. Problems of the passage are most probably detected antenatally and the mode of delivery should be decided before hand. When the problem is concerned with the passenger or the fetus , its estimated birth weight , presentation or position may be abnormal and in some of the cases the cause may be corrected during pregnancy as in breech presentation may be corrected safely by performing external cephalic

version (ECV) which when properly done reduces the incidence of breech presentation at labour and so reducing C/S rates. Most of the operations were decided and performed by resident doctors who need more training in emergency obstetrics care. Extensive training in obstetrics and obstetric maneuvers. Skillful usage of obstetric forceps and ventouse can considerably reduce the rate of C/S deliveries. In this study there were two cases of maternal death due haemorrhage and sepsis. Although C/S increase risk for maternal death so should be account for the clinician when the

risk is balanced and benefits of vaginal delivery compared with the one of Caesarean.
This finding consisted with that for the common causes of death at global level are direct bleeding sepsis [(11)]. Fetal complication was accounted in 9 %, mainly poor Apgar score, stillbirth, preterm labour and CMF. These fetal morbidity and mortality can be reduced in general by upgrade the nursery unit as well as training for working staff and guidelines to be adopted and updated.
In some centers has been reduced perinatal mortality by 50% without increasing the frequency of Caesarean section, only by setting neonatal intensive care [(12, 13)].

## CONCLUSION

The incidence of overall C/S in E-Obeid town was found to be 34.4 % and
Primary C/S was found to be 14.5 %. The commonest indications for primary C/S were found to be failure to progress, fetal distress and breech presentation. Fetal complications were encountered in 9 %, mainly poor Apgar score, stillbirth, preterm labour and congenital malformation. Resident doctors have increased tendency towards solving most of the problems that arise during labour by C/S without any attempt to perform other obstetric maneuvers that may lead to successful vaginal delivery in cases of abnormal labour.

## RECOMMENDATIONS

Obstetrics care providers need to know the risks and the association of C/S deliveries and increased incidence of maternal and neonatal morbidity and mortality .Training on safe obstetrics practices as instrumental delivery in the management of cases of abnormal labour . Encourage care providers to practices ECV when it is indicated or refer patients with breech presentation to where they can have successful ECV to cephalic. Provision of all needed obstetric instrument to all labour rooms as well as blood bank services and rational use of antibiotic therapy.

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