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Original Research Article

Causes of Rapidly Increasing Rates of Cesarean Section in Al-Diwaniyah Maternity and Children Teaching Hospital

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Abstract

A total of 5786 cesarean sections (C.S.) were done at Al_Diwaniyah maternity and children teaching hospital at 1 year interval from January 2018 to January 2019. The C.S. were analyzed and compared with reports from other parts of the world. Out of a total admissions of 15054 pregnant woman, 5786 ended with cesarean sections, and 9268 ended with normal vaginal delivery. The incidence of cesarean section was 38.4% and the incidence of normal vaginal delivery was 61.5%. The age of patients were between 15-40 years old.

Keywords: Cesarean section, vaginal delivery, failure of labor, obstetrics, fetal distress, mortality.

INTRODUCTION

The high incidence of cesarean section has exceeded the ideal rate for cesarean section as recommended by WHO health experts to be between 10% to 15% [1]. In a case study in Jordan, it was reported that cesarean cases exceeded 37% of the total deliveries of the teaching society sector only as depicted in Figure-1. Also, Figure-1 shows the percentage of other society sectors.

Lack of antenatal care in most women in low socioeconomic state lead to high incidence of cesarean sections because many complications of pregnancy not diagnosed and treated.

It is a serious problem since it is preferable to form large families in Arab countries [1].

The patient with cesarean section has a limited number of repeated cesarean sections so it is likely to expose her to family problems such as divorce.

Since there is private sectors in hospitals, this creates a huge reason to increase the rate of cesarean sections [2].

Also, patient desire is the most contributing key factor in the increased rate of cesarean sections.

Case study report showed that mother desire was found as one of the main reasons for planned cesarean section [2]. The women participated in the case report state that they prefer to avoid pain of vaginal delivery [2].

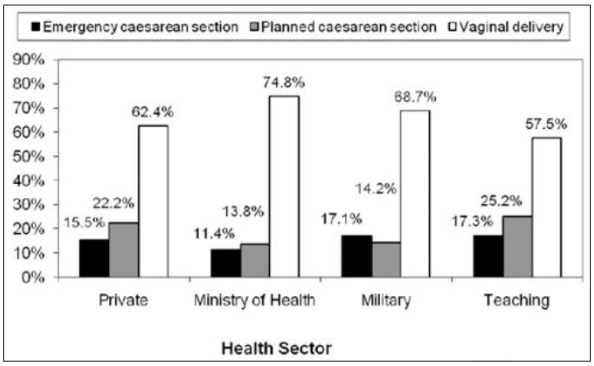

Fig-1: Cesarean section rates according to health sector [2]

Cesarean delivery rate increase over time has not been related to improvements in neonatal outcomes.

In the case study report [2], vaginal delivery had significantly lower death rate than neonatal planned cesarean section and emergency cesarean section.

Many other studies stated that the increase in neonatal death in women undergoing cesarean section may be because of serious medical conditions that the women may have such as pre-eclampsia, diabetes, and heart problems, etc.

Previous scar women in Peru are considered to be a major fraction of the whole rate of Cesarean sections which was 27% [5]. In Egypt, health care personnel claims that the important factor in increasing rates of cesarean section is cesarean section in request but actually a multiple factors contribute to that increase including mothers, obstetricians and environment [6].

In a survey conducted by Betrán *et al*., [7], it was found that in developed countries, 21.1% of deliveries are done by cesarean sections whereas in least developed countries the proportion of cesarean sections is only 2%. The authors found a strong inverse relation between cesarean section rates and infant, maternal, and neonatal mortality in countries with high mortality levels.

Another common reason for the high rate of cesarean sections is defensive obstetric. It was found that 82% of obstetricians performed cesarean sections to avoid neglecting claims [8].

One another factor was found to impact the rate of cesarean sections which is the hospital revenue. The increase in hospital revenue per bed during the period 1976-2005 led to increase the rate of caesarean section in Norway [9]. During that period, hospital revenue increased by about 260%. With higher budgets, the hospitals have greater chances to offer Caesarean deliveries, which are expensive, rather than normal deliveries, which are cheaper [9].

SUBJECTS AND METHODS

Over the period of study, January 2018 to January 2019, information was collected retrospectively from the obstetric department in the maternity hospital.

In January 2018, 1739 pregnant women, 587 normal vaginal deliveries with mal infants, 574 normal vaginal deliveries with female infants.

301 pregnant women ended with cesarean sections with male infants, 277 pregnant women ended with cesarean sections with female infants.

The cause of cesarean sections in these pregnant women was previous one scar or repeated scars in 113 pregnant women. The cause of cesarean section in the rest was either fetal distress, breech presentation or hand presentation, pre-eclampsia, severe oligohydramnios, history of A-P repair.

Cesarean Section

Cesarean section can be defined as fetus delivery using incisions in the anterior abdominal and uterine Walls.

Epidemiology

The rate of cesarean section deliveries in the united states has increased to 22.7 per 100 births in 1985 when it was only 5.5 per 100 births in 1970 [3]. The incidence of cesarean section in individual obstetric Unit is dependent on the patient population and physicians attitudes. Currently, the rate ranges from 10 to 40 percent of all births. It is generally agreed that the more liberal use of cesarean section has contributed to a decrease in the perinatal mortality rate [3]. Table-1 shows the possible indication types for cesarean sections. Also, Table-2 shows the percentage of most common indications for cesarean sections in Al Diwaniyah Hospital for one month of the study. Figure-2 shows the percentage distribution between cesarean section and normal vaginal delivery in Al Diwaniyah hospital over the course of the study.

Table-1: Indications for cesarean section [3]

Type	Indication
Maternal/Fetal	Failure of labor progress Cephalopelvic disproportion Induction failure of labor Abnormal uterine action
Maternal	Maternal diseases Eclampsia/severe pre-eclampsia Diabetes mellitus Cardiac disease Cervical cancer Previous uterine surgery Classic cesarean section

	Previous uterine rupture Myomectomy Obstruction to the birth canal Fibroids Pelvic tumor
Fetal	Fetal distress Cord prolapse Fetal malpresentations Breech, transverse lie, brow
Placental	Placenta previa Abruptio placentae

Table-2: Percentage of most common indications of CS in Al Diwaniyah Hospital in January 2018

Most Common Indications	Number	Percentage (%)
Failure of labor progress, Cephalopelvic disproportion Induction failure of labor, Abnormal uterine action	102	17.7
Maternal (Eclampsia/severe pre-eclampsia)	57	0.99
Maternal (Previous uterine surgery)	148	25.65
Maternal (Diabetes mellitus)	30	5.2
Fetal (Fetal distress)	95	16.4
Fetal (Cord prolapse)	5	0.87
Fetal (Severe Oligohydramnios)	35	6
Breech, transverse lie, brow	98	16.9
Placental (Placenta previa Abruptio placentae)	56	9.7

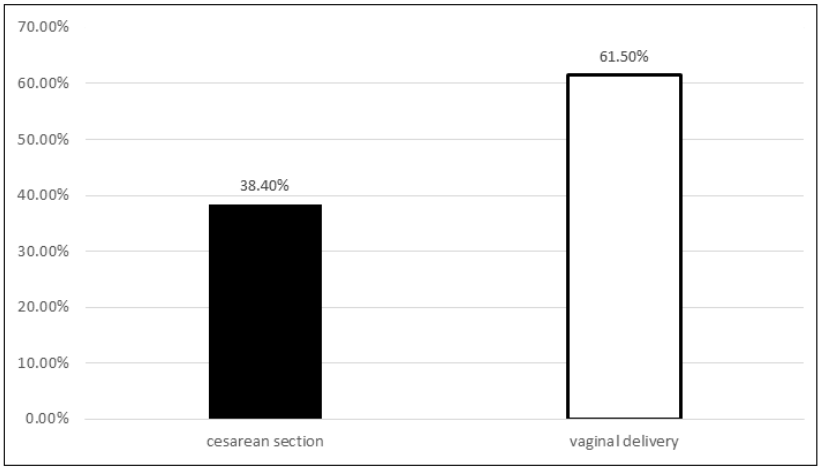

Fig-2: Cesarean section and normal vaginal delivery rate in maternity and children hospital in Al-Diwaniyah

Indications

The indications for cesarean section singularly or in combination are relative rather than absolute and can be classified as shown in Table-1. Failure of labor progress (dystocia) is the frequent indication for cesarean section. This problem may result from cephalopelvic disproportion, fetal malpresentation or failure to induce labor.

Previous classic C. S. is an indication for a repeated cesarean sections.

Cesarean section is appropriate management for fetal distress in which vaginal delivery is not imminent, prolapse cord. Many fetuses presenting by breech are best delivered by C. S., particularly those in whom the gestation is preterm [3].

Other indications

Obstructed labor, malpresentation, malposition, multiple gestation.

Possible indications of cesarean section [1]

- Premature labor with thick cervix.
- Premature membranes rupture
- Transverse lie
- Back inferior with transverse lie.
- Big fibroid in the cervix.

- Reduced accessibility due to lower segments adhesion.
- Post mortem C.S.

Mortality from cesarean sections

A cesarean section is a major operation under any circumstances and maternal mortality figures emphasize this. It is 0.8 per 1000 cesarean sections in the years between 1976-1978.

Vaginal delivery is four to six times less risky than C. S.

The deaths reported are those associated with cesarean sections and not necessarily due to it.

Many more deaths are associated with emergency cesarean section than with the elective procedure. Since the elective procedure is usually performed in day light in the presence of experienced anaesthetic and obstetric staff.

A number of deaths associated with cesarean section are due to anaesthetic and most of these are caused by Mendelson's syndrome.

The other major causes are hemorrhage, sepsis and paralytic ileus and pulmonary embolism, and injury to surrounding structures.

Recently, it was shown that the mothers who had pre-eclampsia prior to operation were linked with death incidents.

The availability of adequate blood, the strict use of aseptic techniques during labor and good surgical practice at C. S with the seniority of the personnel matching the risk involved, are obvious ways in which deaths can be kept to a minimum [4].

CONCLUSIONS

According to presented information, C.S numbers in Al_Diwaniyah is relatively high. One of the methods to reduce it is by improving antenatal care for women especially in the countryside. The second method is to reduce attention to private sector because this may encourage patient to do cesarean sections. The current generation of doctors needs to have the skill-set needed to convince the patient to have vaginal delivery.

In relation to cesarean section by patient desire, we can reduce it by improving normal labor without pain with help of the anesthetists.

Finally, while most C.S. are controlled by physician judgment, it is now the role of ministry of health to interfere and put forward general guidelines for performing C.S.

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