WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 7.523
Volume 6, Issue 8, 148-156. Research Article ISSN 2277–7105

INDICATIONS FOR CESAREAN SECTION IN A SAMPLE OF WOMEN IN BAGHDAD CITY

[1]*Dr. Noor Al-huda Anwar Mahomood and [2]Dr. Basim Hussian Baher

[1]Middle Technical University, College of Health and Medical Technologies, Baghdad.
[2]Ass. Prof. Middle Technical University, College of Health and Medical Technologies, Baghdad.

Article Received on
02 June 2017,
Revised on 23 June 2017,
Accepted on 14 July 2017
DOI:10.20959/wjpr20178-9035

***Corresponding Author**
Dr. Noor Al-huda Anwar Mahomood
Middle Technical University, College of Health and Medical Technologies, Baghdad.,

ABSTRACT

Background*:** cesarean section has traditionally performed when a vaginal would put the mother or baby's life at risk. Cesarean section rate has risen worldwide in the last decades, in 2009 it was 34% in the Unit State of America. Development of modern surgical procedures has contributed to reduction of complications associated with cesarean section. Complications still occur, and most due to the surgical procedure. Long term risk increases with the number of cesarean deliveries in women. ***Objective: To estimate the rate and indications for CS in six maternal hospitals. ***Subject and methods*** this study was cross section study conducted in six maternal hospitals in Baghdad city. All delivered from the 1st November 2016 to the 15th February 2017. three hundred forty-sex pregnant women age between (12-35 years) who give birth at six hospitals were chosen and invited to complete a face to face questionnaire. Participant were asked for demographic information and pregnancy history (age and parity). ***Results:*** Mean maternal age was >= 24 years, about (45.7%) was live in middle socio-economic status. The most common indication for cesarean section in adolescent was fetal distress (27.9%), and previous CS in adult group. The most common indication for cesarean section in nulliparous women was obstructed labour, and previous CS in multiparous women. ***Conclusions***: The rate of CS was high in six maternal hospitals.

KEYWORDS: Cesarean section.

INTRODUCTION

In the past three decades, the rate of caesarean births has risen dramatically, and although Infant Mortality has declined during the same period there is little evidence that more frequent CS births is the cause.[1] This increase over the years was attributed to better surgical technique improved anaesthesia, effective antibiotics and availability of blood transfusion,[2] nevertheless in many countries, these rates have reached epidemic proportions, motivating a debate about whether the high rates are appropriate unnecessary caesarean section is a classic example of the mismatch between evidence and practice in obstetrics.[3]

On the one hand, some are concerned about possible additional maternal and perinatal morbidity caused by unnecessary caesarean sections. On the other hand, assessment of whether the caesarean section operation poses an intrinsic risk to the mother or the baby is difficult Chile and Brazil (both developing countries have the highest CS in the world (40% and 37% respectively), while Belgium and Ireland registered very low CS rate (5-12%), yet have much better maternal and neonatal outcomes.[1] The Arab countries exhibit great disparities in their CS rates and were attributed to different demographic transition and socioeconomic development. In a study about CS rate in 18 Arabic countries, it was found that four countries had a CS rates below 5% (Yemen, Sudan Mauritania, and Algeria), only three countries have rates above 15% (Lebanon, Qatar and Bahrain) and the rest eleven countries have CS rate between (5%-15%) these are (Palestine Oman, Morocco, Libya, Tunisia, Saudi Arabia United Arab Emirates, Egypt, Jordan, Kuwait and Syria).[5] In Iraq, the rate increased from 10% in 2000 to 16% in 2002, reaching 30% and 32% during the years 2009, 2010 respectively (including Kurdistan Region).[6,7] Evidence suggested that CS rate is influenced by the type of health service, whether private or public, as different rate of CS has been found in different areas of the world, In Brazil the rate of CS in public clinic was very low (18-19% compared to that in private hospital 84.4%.[8] The same was found in Chilli.[9] and Queensland Australia.[10] In Iraq, the percentage of CS in the public sector was 24.5% during 2009 increased to 25.8% during 2010, whereas in the private sectors the percentage was very much higher reaching 75.8% and 79.5% during 2009 and 2010 respectively (Kurdistan Region were not included).[6,7] There are many successful programs carried all over the world to decrease the CS rates and substantial increase have been observed in the rates of trial of labour and vaginal delivery after a pervious scar, however these changes have not been sufficient to stem the rising in CS delivery.[11] In 1985, WHO suggested that the rate of CS should not exceed 15% since no additional benefit for the newborn or for the mother is

obtained. On the other hand a rate of less than would reflect difficulty in access to adequate treatment.[8]

Regarding indications of C/S, in many cases there is more than one indication, which can be divided into foetal causes like; foetal distress, cord prolapse, gross prematurity, mal-presentation,[13] macrosomia,[14] twin,[15] post term pregnancy[16] and decrease foetal movement where evidence indicated that decrease foetal movement late in 3rd trimester is sensitive but not specific symptoms of foetal non-wellbeing.[17] Maternal causes like: faults in the birth canal (Cephalo-pelvic disproportion),[13] dystocia (due to arrest of dilatation or prolongation of dilatation),[18] pelvic tumour, cervical or vaginal stenosis, repeated CS,[13] antepartum haemorrhage (APH) (placental abruption or placenta previa),[19] fulminating pregnancy induced hypertensions, bad obstetric history obstructed labour[13] and CS on maternal request where traditionally it has been considered inappropriate for women to have an elective CS on request in an uncomplicated pregnancy until when the New England Journal of Medicine published an article advocating elective caesarean delivery on request, the main reason for CS on request is to avoid prolonged labour and for foetal wellbeing.[20] It is known that unnecessary CS does more harm than good. When all is normal with the mother the CS has an eightfold higher mortality than vaginal delivery and a higher incidence of complications in subsequent pregnancies Maternal mortality due to CS is between 6-22 deaths per 100000, half of these deaths are related to intra-operative complications while others are related to anaesthetic and postoperative complications. In recent years a shift in the aetiology of death from haemorrhage and infections to thromboembolic events was noticed.[11]

AIMS OF THE STUDY

To determine the indications for CS in maternal hospitals in Baghdad city.

METHODOLOGY

Design of the study: A cross section study was conducted in Baghdad city form the period between 1st November2016 and 15thFebruary 2017.

Setting of the study: This study was performed in 6 maternal hospitals in Baghdad city. (Fatima Al- Zahra Hospital, Al-Alwaia Teaching Hospital, Abn-Al-Baladi and Baghdad teaching Hospital) in Al-Rusafa district, (Al-Kadhimiya hospital, Al-Karkh Maternity hospital in Al-karkh district.

The sample of the study: A non- probability (a convenient) sample of (346) of pregnant women delivered by cesarean section in the six maternal hospitals.

Data Collection: Data were collected through direct interview of pregnant women using questionnaire form, which was designed for the study purpose.

The purpose of the study was clearly explained to all pregnant women and their verbal consent were obtained, before filling the questionnaire.

Data analysis: analysis of data was carried out using the available statistical package of SPSS-22 (Statistical Packages for Social Sciences- version 22).

RESULTS

Table (1) shows that the higher percentage of cesarean section 22 was in Al Emamen Medical Hospital, and the lowest percentage 12.7 was in Fatema Al Zahra Hospital.

Table 1: Distribution of study sample according to hospitals.

Hospital name	No.	%
Ibn Al Baladi Hospital	60	17.3
Baghdad teaching Hospital	53	15.3
Elwiya Delivery Hospital	60	17.3
Al Karkh Delivery Hospital	53	15.3
Fatema Al Zahra Hospital	44	12.7
Al Emamen Medical Hospital	76	22
Total	346	100

Table 2: Distribution of sample according to age groups.

Age (years)	No.	%
14---15	1	0.3
16---17	13	3.8
18---19	73	21.1
20---21	14	4
22---23	25	7.2
=>24	220	63.6
Total	346	100

Demographic characteristics: Table (1) shows the peak of cesarean section was conceived at age (=>24) year old.

Socio-economic status: Table (2) shows the distribution of sample according to socio-economic status. pregnant women who had cesarean section are more likely to be live in high and middle socio-economic status (45.7%, 37% respectively).

Table 3: Distribution of sample according to socio-economic status.

Socio-economic status	No.	%	P value
Low	60	17.3	0.012
Middle	158	45.7	
High	128	37	
Total	346	100	

Indications for cesarean section for age: Table (3) shows the distribution of indications for cesarean section according to age, fetal distress were found to be the higher cause in teenager pregnant women 27.9% than adult women 8.5% ,while previous C.S were found to be higher in adult than teenager pregnant.

Table 4: Distribution of indications for cesarean section according to age.

Age	12-19 years		20-35 years		Total
Indication for cesarean section	No	%	No	%	
Fetal distress	24	27.9	22	8.5	46
Cephalopelvic disproportion	19	22	21	8.1	40
Previous CS	10	11.6	74	28.5	84
Placenta abruption	3	3.5	25	9.6	28
Placenta previa	2	2.3	23	8.8	25
Abnormal presentation/lie	13	15.1	43	16.5	56
Oligohydramnios	2	2.3	5	1.9	7
Post- term pregnancy	2	2.3	5	1.9	7
Planned for CS previously	2	2.3	10	3.8	12
Prolong/ obstructed labour	9	10.4	32	12.3	41
Total	**86**	**100**	**260**	**100**	**346**

Table (4) shows the most common indications for cesarean section in nulliparous was prolong/ obstructed labour (39.5%). And in multiparous was previous CS (26.3%).

Table 5: Distribution of indications for cesarean section according to parity.

Parity	Nulliparous women		Multiparous women		Total
Indication for cesarean section	No	%	No	%	
Fetal distress	9	11.8	37	13.7	46
Cephalopelvic disproportion	10	13.15	30	11.1	40
Previous CS	13	17.1	71	26.3	84
Placenta abruption	4	5.2	24	8.9	28
Placenta previa	2	2.6	23	8.5	25
Abnormal presentation/lie	2	9.3	54	20	56
Oligohydramnios	2	2.6	5	1.9	7
Post- term pregnancy	2	2.6	5	1.9	7
Planned for CS previously	2	2.6	10	3.7	12
Prolong/ obstructed labour	30	39.5	11	4.1	41
Total	**76**	**100**	**270**	**100**	**346**

Figure (1) shows the birth weight of 346 babies delivered by cesarean section. Nearly half of them had 3000-3400 gm weight.

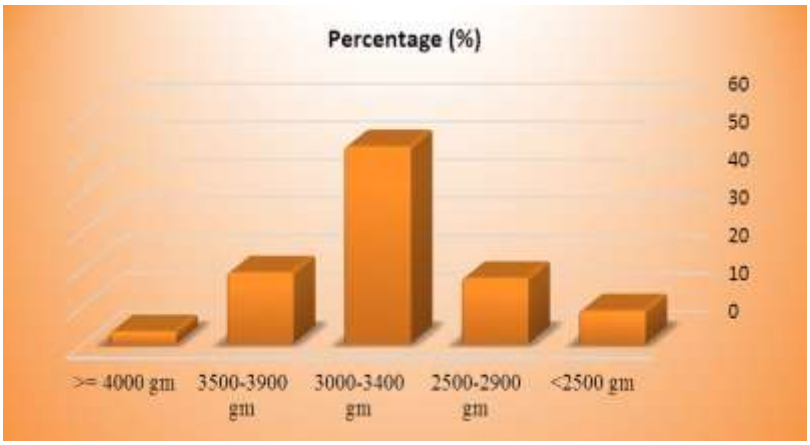

Figure 1: The birth weight of babies delivered by cesarean section.

DISCUSSION

The most common overall indications for cesarean section which were fetal distress (27.9%), followed by cephalopelvic disproportion (22%) were more commonly found among the teenage mothers than adult mothers. This result is in agreement with the study that done in India that showed that the most common indication for cesarean section were fetal distress (60%) followed by cephaloplelvic disproportion (22.8%).[1] The possible explanation could be under development of pelvis in younger mother and occurrence of cephalopelvic disproportion more frequently in teenage mothers because of the immaturity of their pelvic bone.[31]

Regarding parity the most common indications for cesarean section in nulliparous women was prolong/obstructed labour (39.5%). This result closed to other result done Tanzania that reported (30%) of indications was due to prolong/obstructed labour.[29] while the most common indication for cesarean section in multiparous women was previous SC. This result was higher than the result obtained by the study done in Tanzania that reported (25%) of indications was due to previous SC.[29]

CONCLUSION

The rate of CS to total deliveries was high in sex hospitals. Fetal distress was the first indication in teenage group. Previous cesarean section was the first indication in adult group. Nulliparous women has obstructed labour as indication for CS as compared with multiparous women has previous cesarean section as indication for it.

REFERENCE

1. Sreevidya, S., & Sathiyasekaran, B. W. C. High caesarean rates in Madras (India): a population-based cross sectional study. BJOG: An International Journal of Obstetrics & Gynaecology, 2003; 110(2): 106-111.
2. Hofmeyr, G. J., and Smaill, F. M. Antibiotic prophylaxis for cesarean section. The Cochrane Library, 2002.
3. Lumbiganon, P., Laopaiboon, M., Gülmezoglu, A. M., Souza, J. P., Taneepanichskul, S., Ruyan, P., & Bang, H. T. Method of delivery and pregnancy outcomes in Asia: the WHO global survey on maternal and perinatal health 2007–08. The Lancet, 2010; 375(9713): 490-499.
4. Maine, D. Detours and shortcuts on the road to maternal mortality reduction. The Lancet, 2007; 370(9595): 1380.
5. Jurdi, R., & Khawaja, M. Caesarean section rates in the Arab region: a cross-national study. Health policy and planning, 2004; 19(2): 101-110.
6. Ministry of Health – Iraq; Annual report. Ministry of Health, Iraq, Publications, 2009.
7. Ministry of Health – Iraq; Annual report. Ministry of Health, Iraq, Publications, 2010.
8. Almeida, S. D., Bettiol, H., Barbieri, M. A., Silva, A. A. M. D., & Ribeiro, V. S. Significant differences in cesarean section rates between a private and a public hospital in Brazil. Cadernos de Saúde Pública, 2008; 24(12): 2909-2918.
9. Murray, S. F. Relation between private health insurance and high rates of caesarean section in Chile: qualitative and quantitative study. Bmj., 2000; 321(7275): 1501-1505.

10. Howell, S., Johnston, T., & Macleod, S. L. Trends and determinants of caesarean sections births in Queensland, 1997–2006. Australian and New Zealand Journal of Obstetrics and Gynaecology, 2009; 49(6): 606-611.
11. Murphy N. J., and Mark DeutChman; Caesarean Delivery. In; Lesley Atwood, Mark DeutChws, Eugene Bailey, Jeffery Quinlan, Stony Abercrombie, Advanced Life Support in Obstetrics, 2004; 4th edition: 401.
12. Baker Ph., Johnson I, Jones G. et al.; Caesarean section in obstetrics procedure. In Obstetrics by Ten Teachers, chapter 18, 1994; 16TH edition, Campbell- Lees publishing, 297.
13. Saleh A. M., AL-Sultan S.M., Moria A. M. et al; Foetal Macrosomia greater than or equal to 4000 gram: Comparing Maternal and neonatal outcomes in diabetic and non-diabetic women. Saudi Med, J. 2008; 29: 1463-6.
14. Audal Aziz A. Legwiser, Sultan M. AL-Sultan; caesarean delivery of second twin after vaginal delivery of first twin, Saudi medical Journal, 1999 Dec., 20: 963.
15. Wilbur J., Graber M., In Family Practice Examination and Board Review, published by MC-Graw Hill Company, 2005; 599.
16. Lipsky M.S., King M.S., Susan J. L. et al.; Obstetrics. In Family Medicine Certification Review. 2nd edition, edited by Lippincott Williams and Wilkins, 2007; chapter 69: 66.
17. Greenwald J.; Complication during Labour and delivery, In Paulman P., Paulman A. And Harrison J.; Taylor's Manual of Family Medicine, 2008. 3rd edition: 553.
18. Nothnagle N.; Third trimester vaginal bleeding, In Rakel R., Essential Family Medicine. 3 rd edition, edited by Saunders Elsevier, 2006; 576.
19. Mandy A., and Badreen A.; Caesarean Section on Request, Saudi Medical Journal, 2004; 25: 1820-21.
20. Kumbi, S., and Isehak, A. Obstetric outcome of teenage pregnancy in northwestern Ethiopia. East African medical journal, 1999; 76(3): 138-140.
21. Bacci,A., et al. Outcome of teenage pregnancy in Maputo, Mozambique.International Journal of Gynecology and Obstetrics, 1993; 40: 19-23.
22. Lao, T. T., and Ho, L. F. Obstetric outcome of teenage pregnancies. Human Reproduction, 1998; 13(11): 3228-3232.
23. Derme, M., Leoncini, E., Vetrano, G., Carlomagno, L., & AlEANDRI, V. Obstetric and perinatal outcomes of teenage pregnant women: a retrospective study. Epidemiology, biostatistics and public health, 2013; 10(4).

24. Kovavisarach, E., Chairaj, S., Tosang, K., Asavapiriyanont, S., & Chotigeat, U. Outcome of teenage pregnancy in Rajavithi Hospital. Medical journal of the Medical Association of Thailand, 2010; 93(1): 1.
25. Mukhopadhyay, P., Chaudhuri, R. N., & Paul, B. Hospital-based perinatal outcomes and complications in teenage pregnancy in India. Journal of Health, Population and Nutrition, 2010; 494-500.
26. Ganchimeg, T., Ota, E., Morisaki, N., Laopaiboon, M., Lumbiganon, P., Zhang, J., and Vogel, J. P. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. BJOG: An International Journal of Obstetrics & Gynaecology, 2014; 121(s1): 40-48.
27. Linn Becher and Siril Stokke. Indications for Cesarean Section in St. Joseph Medical Hospital, *Moshi, Tanzania.* Undefined, 0027.