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THE RELATIVE PREVALENCE OF CESAREAN SECTION AND ITS INDICATIONS IN AMIRALMOMENIN HOSPITA, L AHVAZ; 2009 – 2010

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ABSTRACT

Objective: Cesarean section is the commonest surgery in gynecology and it is one method of pregnancy termination. An overview of cesarean section status in world shows that its rate is very high. Report's of cesarean section status in Iran representative that its rate is very high too. Therefore this study performed to survey cesarean section rate and it's indications in Amiralmomenin hospital in Ahvaz city. **Methods**: This survey is a descriptive-cross sectional retrospective study. The data's from all of patients that undergo cesarean section in 2009 - 2010 years registered in questionnaire arranged before. Then the data's analyzed with descriptive indexes and spss-16 program. **Findings**: Results of survey show that the number of all parturition was 9753 case that %51/6 of those was natural delivery and %48.4 of those was performed by cesarean section. In this study %59.27 of women had a history of previous cesarean section. Majority of cesarean section indications arranged by rate were previous cesarean section (%59.27), thick meconiumstain (%11.5), non cephalic presentation (%6/26), dystocia (%5.47), CPD (%3.8) and fetal distress (%2.64). **Conclusion**:

Pay off this study is near half of pregnancy termination performed by cesarean section and its majority indication is previous cesarean section.

KEY WORDS: Cesarean section, indication, rate.

INTRODUCTION

Parturition through cutting the abdominal wall and uterine wall is called caesarean section. Four common causes of caesarean section respectively are repetitive cesarean section, disorder in vaginal Parturition progress, breech face and fetal distress. Rate of maternal mortality due to caesarean section is 2 to 3 times and morbidity rate due to cesarean section is 5 to 10 times more than rate of mortality due to vaginal birth.[1] The amount of incidence of cesarean section has different statistics. Cesarean rate in public centers in Brazil 25% and in Chile 27% to 28% and also in 19 countries in Latin America between 8.16 to 40% have been reported.[4-2] Because the international acceptable rate for cesarean section, (25%) has been proposed,[5] maternal mortality rate due to cesarean section even in the best condition is 5 to 7 times more than mortality rate due to natural delivery and maternal complications and Hospitalization period increase.[7-1] Major risks such as infection, bleeding and anesthesia, thromboembolism attacks, and respiratory pneumonia after surgery can be threatening and increase the relative risk of mortality of those mothers who had cesarean section even to 7 times of natural delivery rate.[8-10] In Caesarean section, maternal mortality rate is about 1 per thousand surgeries that 25% of them has been cited as the result of anesthesia.[8-10] A descriptive study in all private and public institutions in East Azarbaijan Province in 1998, showed that the rate of cesarean section in this province was 27%. The causes of Caesarean section at public centers in order of frequency were: The lack of progress in the parturition process (25.3%), previous cesarean section (25%), fetal distress (20.9%), defective presentation (8.86%), elective cesarean section (7.51%), bleeding in the third quarter (20.5%), twin birth (1.2%), maternal systemic disease (1.8%) and cesarean section for tubal ligation (0.88%).[11] The frequency of causes of performing cesarean section in a prospective study performed by Alavi Hospital of Ardabil city during the first half of 2001-2002 were as follows: dystocia (30.7%), repetitive cesarean section (19.7%), fetal distress (10.3%), valuable fetus (10%), breech (8%), preeclampsia (5.7%), tubal ligation, elective (4.3%), post term (4%), placental abruption (1.3%), other reasons (1.7%).[12] A descriptive-analytic study performed in maternity hospitals in Tehran in 2001-2002, indicated the rate of 66.5 percent of cesarean section in Tehran.[13] The results of another study in Chahar Mahal Bakhtiari during

2002-2003, showed that 44% of all parturitions were performed through cesarean section that 74% of them was emergency and 26% was selective. The most common reasons for emergency cesarean section were fetal distress (30.2 %), previous cesarean section (22.1 %) and lack of progression of parturition (20.6 %) and in elective cesarean section: previous cesarean section (43.3%), narrow pelvis (20%), hazardous pregnancy (7.7%) non-appearance of the fetal head (6%). The relative frequency of cesarean section in hospitals of Shahrekord ,Social Security, Broujen, Farsan, and Lordegan was respectively 46%, 60%, 39%, 39%, 39%,and 28%.[14] It has been reported that the incidence of cesarean section among 6 hospitals in the city of Tabriz in 2004-2005 was 45.6%[15] and in Birjand was 40.3%. The cause of 45.8% of performed cesarean sections was due to previous cesarean section, tubal ligation and patients' request, 40% due to the lack of progress of parturition, cephalo-pelvic disproportion, narrow pelvis, placenta previa, twin birth and eclampsia and 14.2% due to fetal distress and mekonial.[1] In a study performed in 2007, the number of cesarean sections performed in Ahwaz Imam Khomeini Hospital and Alhadi Hospital were up to 23% and 33%, respectively.[16] The primary purpose of the cesarean section was saving the lives of mothers who were in danger of death due to the cessation of parturition process. But during next years, indications of its performing were expanded and encompassed man other parturitions during which mother's and fetus's lives were at risk due to various reasons. Increased safety of this method, mainly is due to advances in surgical techniques, improvement of anesthesia conditions, effective antibiotics, and the possibility of blood transfusion. Obstetricians after exposure to severe legal pressure in medicine, gradually pretermitted breech vaginal parturitions and using forceps parturitions and broadened the definition of fetal distress during parturitions and made diagnosis of dystocia free. Concerning about the complaints also has a significant role in increasing cesarean section. While cesarean section is not associated with a decrease in children with neurological problems and rising cesarean section doesn't reduce the incidence of neonatal seizures or cerebral palsy cases. The number of caesarean sections has increased among women with preeclampsia, whereas the number of induction of parturition in these patients has decreased. the number of cesarean section due to reduced vaginal delivery after cesarean section, fear of injury to the bottom of the pelvic following a vaginal delivery, preterm labor with medical indication, reducing the risk of fetal injury and patient's demand is increasing.[19] Cesarean section is necessary when vaginal delivery is dangerous for the mother or fetus, labor cannot be induced, fetal problems during vaginal delivery cause serious risks or when an emergency situation necessitates immediate delivery. Many causes have been very well accepted,

although some of them are subjectively and selectively applied to specific individuals, as well as other causes of cesarean section are still under discussion. Most cesarean sections occur due to fetal indications, and just a few of them have maternal indications, and in some cesarean sections, both mother and fetus benefit.[19]

There is no doubt that in emergency cases for reducing the maternal and infant mortality, cesarean section in the proper manner is necessary**,** but natural delivery with its all clear and undeniable benefits has been replaced by surgery with more complications. According to issued statistics, the rate of cesarean section is significantly higher in private hospitals than university hospitals and on the other hand because of the lack of cooperation from the private hospitals to provide accurate statistics, and because of inability to access to their actual data, this study has been designed in AmiralMomenin Social Security hospital in Ahwaz city which is a referral hospital for families covered by social security department and it has the state between the university and private hospitals until intermediate statistics and data are provided and the prospect of caesarean section situation in this center is designed.

MATERIALS AND METHODS

In this descriptive-cross sectional study, the studied population was the pregnant women who had referred to maternity of Amiralmomenin Social Security hospital from 12 pm on March 21, 2009 until midnight on April 18, 2009 for delivery, thus the files before and after that time interval are excluded from this study and there hasn't been need to having sampling**.** Completing data collection forms associated with plan purposes were performed through referring to patients' files and the data, after collecting and coding, were analyzed using computer software SPSS version 16. Data collection forms were designed based on content validity and the views of a number of specialists in community medicine, obstetrics and through referring to congener studies. At first, files of all women who had referred to the hospital for delivery, were studied. 5026 persons of all 9753 people who had referred to the hospital for delivery had vaginal delivery so they were excluded from the study. All questionnaires were anonymous and hospital officials were assured that the information is confidential and protected completely and reserved solely for research.

RESULTS

The results of this study showed that the total number of parturitions in this hospital during a year was 9753 cases that 51.6 percent of which was natural delivery and 48.4 percent was cesarean section**.** Mean and Standard Deviation of the age of those women who had cesarean

section were 27.7 ± 5.2 years with age range of 14 to 44 years. 59.27% of the women had a history of previous cesarean section. The most common causes of cesarean section respectively have included repeated cesarean section 59.27 percent, excretion of thick meconium 11.5 percent, non-cephalic presentation 6.26 percent, dystocia 5.47 percent, cephalo-pelvic disproportion 3.8 percent and fetal distress 2.64 percent.

Table 1- absolute and relative frequency distribution of women undrgone cesarean section based on age, residence, occupation and education level (n = 4727 persons)

Percent	*frequency*	*variable of age*
10.5	496	19≤
42	1986	24-20
28.4	1345	29-25
14	661	34-30
5	236	34≥
		place of residence
21	993	Village
79	3734	City
		occupational status
83.5	3947	Housewife
16.5	780	Employed
		education level
7.3	345	Illiterate
27	1277	elementary school
22.2	1049	secondary school
27.1	1281	Dimploma
16.4	775	Educated

Table 2- The relative frequency distribution of women based on type of parturition

Percent	*frequency*	*type of parturition*
51.6	5026	Natural
48.4	4727	cesarean section
100	9753	Total

Table 3- Absolute and relative frequency distribution of women undergone cesarean section based on causes of cesarean section

percent	*frequency*	*causes of cesarean section*
28.2	3223	maternal cause
9.3	1065	fetal cause
22.5	439	maternal-fetal cause
100	4727	Total

Table 4- Absolute and relative frequency distribution of maternal causes in women undergone cesarean section

percent	*frequency*	*maternal causes*
87.2	2812	previous cesarean section
4.66	150	medical and surgical cause
3.67	118	late parturition
3	97	lack of progress in the parturition process
0.8	26	lack of response to induction
0.62	20	high age of mother
100	3213	Total

Table 5- Absolute and relative frequency distribution of fetal causes in women undergone cesarean section

percent	*frequency*	*fetal causes*
51.17	545	excretion of meconium
27.79	296	non-cephalic presentation
11.73	125	fetal distress
6.94	74	twain birth
1.78	19	placenta previa
0.56	6	Abruption
100	1065	Total

Table 6- Absolute and relative frequency distribution of general causes of cesarean section in women undergone cesarean section

percent	*frequency*	*general causes of cesarean section*
59.27	2802	previous cesarean section
11.5	545	excretion of meconium
6.26	296	non-cephalic presentation
5.47	295	Dystocia
3.8	180	cephalo-pelvic disproportion
2.64	125	fetal distress
2.5	118	late parturition
2	97	lack of progress in the parturition process

1.56	74	twain birth
0.95	45	high blood pressure
0.82	39	Infertility
0.76	36	Diabetes
0.63	30	repair history cerclage)(
0.55	26	lack of response to induction of labor
0.42	20	high age
0.4	19	placenta previa
0.21	10	Stillbirths
0.12	6	placental Abruption
100	4727	Total

CONCLUSION

Cesarean section is a method for birth of a newborn in an emergency situation and should not be thought of as a substitute for natural delivery. Other side effects accompanied with cesarean section impelled World Health Organization to consider optimal horizon of Cesarean section 15% in 2000.[5] In this study, among those 9753 pregnant women were referred for delivery, 4727 persons or 48.4 percent of them have performed cesarean section. In the descriptive study of Joodati and Yavarikia (1997-1998), the rate of cesarean section was 27% in the East Azerbaijan province, so that all performed cesarean sections constituted 25.5% of total deliveries in public centers and 62.5% of total deliveries in private sector.[11] In the study of Shariat and colleagues in 2001-2002, the rate of cesarean section in Tehran was 66.5% and this rate was significantly higher in private hospitals than in public hospitals (84% vs. 47% - P<0.0001).[13] The study of Tamook and colleagues that was performed with the aim of studying the rate of cesarean section and its indications in Social Security hospital of Ardabil in 2003-2004, 45.4% of all parturitions was cesarean section and 54.6% of them was natural delivery.[21] Shakerian also reported the rate of cesarean section in Chahar Mahal va Bakhtiari 44% and in Social Security hospital of Shahrekord 60%.[14] Naseh and colleagues reported that in 2007-2008 in Birjand, among 1500 mothers under study, 895 persons (59.7%) had natural delivery and 605 persons (40.3%) had cesarean section.[1] The results of another study in 2007 showed that the rate of cesarean section in training Imam Khomeini hospital of Ahwaz and in Alhadi hospital of Shooshtar was 19% and the rate of vaginal delivery was 71%. Cesarean section rate in Imam Khomeini hospital was 23% and in Alhadi hospital was 33%.[16] In the study of Mohammad Pour Asl, Rostami and Torabi in 2004-2005 in Tabriz, out of 1473 selected women, 672 persons (45.6%) had cesarean section**.** This rate has been reported 44.9% in Social Security hospitals.[15] Results of the study of Tatari and his

colleagues (2002-2003) on 215 pregnant women in training hospitals and on 394 persons in private selective hospitals in Mashhad, which were randomly chosen, showed that the frequency of cesarean section in training hospitals was 26.9% and in private hospitals was 67.6% that these two were significantly different.[17] More than 85% of cesarean sections in the United States are performed due to previous cesarean section, fetal distress, dystocia, breech presentation.[18]

Scott and Porter have cited the rate of cesarean section in the United States in 2005, 30.2%.[18] In 2007, the rate of all cesarean sections, about 31.8% has been reported.[19] Given the above cases, it seems the results of this study are consistent with similar studies in our country, but its rate is higher than this rate in the United States.

In this study, mean and Standard Deviation of the age of those women who had cesarean section was 27.7 ± 5.2 years with age range of 14 to 44 years. In the study of Naseh and colleagues, the mean age of mothers was 27.5 ± 6.08 and most people who were over 35 years had cesarean section.[1] In the study of Tatari and colleaguet, the mean age, 27.3 years has been reported.[17] In the study of Mobaraki, Zade Bagheri and Zandi Ghashghayi, the mean and the Standard Deviation of the age of those people who were under study was 27.9 ± 5.2.[20] In the Shakerian study, the frequency of cesarean section in age group 20-25 years was 41%, 26-30 years 29% , 30-35 years 15%, under 20 years 9% and over 35 years 6%, mothers with the first pregnancy 43.5% and with second pregnancy was 25%.[14] In the study of Mohammadpour Asl, Rostami and Torabi also mean and Standard Deviation was 27.69 ± 5.3 years, the youngest woman was 15 years old and the oldest woman was 46 years old.[15]
In this study, the most common causes of cesarean section were repeated cesarean section (59.27%), excretion of thick meconium (11.5), non-cephalic presentation (6.26), dystocia (5.47), cephalo-pelvic disproportion 180 (3.8), fetal distress (2.64) and late parturition (2.5)**.** In the study of Shariat and colleagues in Tehran, in 2002-2003, out of 548 performed cesarean sections, 72% was performed based on physician's choice and 22% was performed only because of the mother's request and repeated cesarean section (73.5%) was mentioned as the most common obstetric cause of selective cesarean section.[13] Mobaraki, Zadeh Bagheri and Zandi Ghashghayi in 1382 in Yasooj, showed that the most common causes include: repeated cesarean section 23.69%, elective cesarean section 13.67%, cephalo-pelvic disproportion 13.56%, fetal distress 13.45%, non-cephalic presentation 11.63% and mother's diseases 10.35%.[20] Tatari and colleagues have also cited previous cesarean section as the

most common cause of cesarean section in training and private hospitals in Mashhad. Causes of cesarean section at teaching hospitals in order of frequency were: previous cesarean section 38.6%, fetal distress 15.8%, lack of progress 10.2%, abnormal presentations 9.3%, cephalo-pelvic disproportion 6% and other causes.[17] In the process of evaluation of those cases who had cesarean section at Amiralmomenin hospital, although the most common cause of cesarean section was repeated cesarean section that investigation on its cause could be a point of hope in order to planning for reducing the rate of cesarean section, unlike other studies, there was no cesarean section by mother's choice. The results of this study showed that out of 4272 performed cesarean sections, 3223 cases (68.2%) have had maternal indication, 1065 cases (9.3%) fetal indication and 439 cases (22.5%) maternal-fetal indication. Maternal, fetal and maternal-fetal indications in order of frequency included previous cesarean section (59.27%), excretion of thick meconium (11.5%) cephalo-pelvic diproportion (3.8%). Bolbol Haghighi and colleagues reported that out of 514 performed cesarean sections in the Shahrood city in 2000-2001, 343 cases (66.7%) had maternal causes, 46 cases (9%) maternal and fetal and 125 cases (24.3%) had fetal causes. So that repeated cesarean section (25.7%), cephalo-pelvic disproportion (8%) and decreased amniotic fluid (7.6%) were respectively the most common causes of maternal, maternal-fetal and fetal indications.[6] Shakerian's study also showed that 74% of all cesarean sections was emergency and 26% was elective. The most common causes of emergency cesarean section were fetal distress (30.2%), previous cesarean section (22.1%) and lack of delivery progression (20.6%) and in elective cesarean section: previous cesarean section (43.3%), narrow pelvis (20%), high-risk pregnancy (7.7%) and the non-appearance of the fetal head (6%).[14]

In descriptive study of Joodaki and Yavarikia, the causes of cesarean section in public centers respectively included: lack of delivery progress (25.3%), previous cesarean delivery (25%), fetal distress (20.9%), defective presentation (8.86%), elective cesarean section (7.51%), bleeding in the third quarter (20.5%), twin birth (1.2%), mother's systemic disease (1.8%) and cesarean section for tubal ligation (0.88%). Since the indication of cesarean section hadn't clearly been mentioned in all files existed in private hospitals, therefore a limited study was done on the private centers that its results were: fetal distress (36.9%), lack of progress (20.3%), previous cesarean section (16.5%), and bleeding in third quarter (5.7%).[11] Frequent causes of cesarean section in Alavi Hospital in Ardabil city were as follows: dystocia (30.7%), repeated cesarean section (19.7%), fetal distress (10.3%), valuable fetal

(10%), breech (8%), preeclampsia (5.7%), tubal ligation, elective (4.3%), post-term (4%), placental abruption (1.3%), and other reasons (1.7%).[12] The study of Naseh and colleagues in Birjand also showed that the cause of 45.8% of all performed cesarean sections was previous cesarean sections, tubal ligation and patient's request, 40% due to the lack of delivery progress,cephalo-pelvic disproportion, narrow pelvis, placenta previa, twin birth and eclampsia and 14.2% due to fetal distress and mekonial.[1] More than 85% of all cesarean sections in the United States are performed due to previous cesarean section, fetal distress, dystocia, breech presentation.[18]

It seems that cesarean section has only been performed in urgent indications and as the last attempt, while it has been seen that frequency of unnecessary cesarean section in private hospitals is much higher. Cesarean section is required when vaginal delivery is dangerous for mother or fetus, parturition cannot be induced, dystocia or fetal problems at the time of vaginal delivery cause serious risks or when emergency conditions necessitate urgent parturition. Many indications are well accepted, although some of them are arbitrary or used selectively about particular individuals, other indications of cesarean section are still under discussion. Most cesarean sections are performed due to fetal indications, a few of them just have maternal indications, and in some cesarean sections both mother and fetus benefit.[19] But performing cesarean section in a singleton pregnancy and in the absence of any medical and midwifery indications and just because of the mother's request is a relatively new and disputable issue that encompasses very moral, emotional, and legal concepts. It seems that pregnant women's little knowledge about the benefits of natural delivery and risks of cesarean section, induce them to have cesarean section. Therefore for enhancing positive attitudes of pregnant women toward the benefits of natural delivery, establishment of training sessions in health centers and group education and also face to face training about the advantages of natural delivery and disadvantages of cesarean section are recommended.

REFERENCES

1. Naseh N. The prevalence and causes of cesarean section and its complications in women admitted to Valye Asre, s Birjand hospital, Modern Care, Nursing and Midwifery Journal of Birjand University of Medical Sciences 2010; 7: 17-1.[Persian].
2. Nuttal CH. The cesarean culture or Brazil. Br Med J 2000; 320(12): 1080-1083.
3. Murray SF. Relation between private health insurance and high rates of cesarean section in Chile: qualitative and quantities study. Br med J 2000; 321(202): 1501-1505.

4. Belzian JM, Althabe F. Rate and implication of cesarean section in Latin America Ecological study. Br med J 1999; 31(9): 1397-1400.
5. World Health Organization. Appropriate technology for birth. Lancet 1985; 4(5): 436-437.
6. Bobol Haghighi N. Comparing the frequency of vaginal delivery and cesarean section and its causes in Shahrod, 2000. Journal of Reproduction and Fertility 2002 no 1: 58-50.[Persian].
7. Motamedi B, JanqrbanM. The prevalence of Caesarean section and some its factors affecting in Kerman. Journal of Medical Faculty Guilan University of Medical Sciences 2000; 33:34, 88. [Persian].
8. Afshari S, DstfanF.The prevalence of vaginal delivery, cesarean section and its reasons in the public and private treatment centers in the province of Khorasan. Iranian Journal of Obstetrics and Gynecology and Infertility 2009; 1: 45-40. [Persian].
9. Liford RJ, Van Cooeverden de Groot HA, Moor PJ. The relative risk of cesarean section and pre-existing physiological disturbances. Br J of Obst & Gyn 1990; 9 (7): 833.
10. Scott RJ, Philip J, Charles BH. Danforths obstetrics and gynecology. 7th ed. Philadelphia: JB Lippincott Company; 1994; 818.
11. Jodati AR. Evaluation of the rate and cases of cesarean section in East Azerbaijan province in 1997. Journal of Tabriz University of Medical Sciences. Summer 2000; 34 (46): 24-19. [Persian].
12. Nakhostinrohi P., Abbasgholizadeh N. Causes of cesarean section in the first half of 1380 in Ardebil Alavi Hospital. Professional Doctorate Thesis. Ardabil University of Medical Sciences, Ardabil, 2001:60-84. [Persian].
13. Shariat M. Evaluation of cesarean section delivery and its factors in the maternity hospital in Tehran.Payesh. 2001; 1 (3): 10-5. [Persian].
14. Shakerian B.The relative frequency of cesarean section and its causes in Chaharmahal Bakhtiari Province.Journal of Shahrekord University of Medical Sciences. 2003; 6 (1): 24-1. [Persian]
15. Muhammadpur A. The prevalence of Caesarean section and demographic factors associated with the city of Tabriz, 2003. Medical Journal of Tabriz University of Medical Sciences 2006; 28:105 - 101. [Persian].
16. Karami K. Comparison of Frequency Vaginal and Cesarean Deliveries. Iranian J Publ Health, 2009; 38(4): 97-102. [Persian].

17. Tatari, F. A comparative study of the prevalence and causes of cesarean section in pregnant women admitted to private hospitals and educational choice Mashhad. Ilam University of Medical Sciences Jurnal, 2003; 12(42 and 43): 30-25-31. [Persian].
18. Scott, James R.; Porter, T. Flint. Caesarian delivery. In: Danforth d et al., editor. Dan forth's Obstetrics and Gynecology. 9th ed. United States of America; 2008; 680-695(chapter 27).
19. Cunnigham FG, Leveno KJ. Williams Obstetrics. 23thed. New York: Mc Graw-Hill: 2010, p. 500-8, 832-40.
20. Mubaraki, A. Prevalence and causes of cesarean section in Yasuj in 2003, Journal of Armaghane Danesh, 2005; 10(3): 66-2. [in Persian]
21. Tamuk, A. Evaluation of indications for cesarean section and in Ardebil the social security hospital, 2003. Journal of Ardabil University of Medical Sciences 2003; 8: 31-1. [in Persian]