Journal of Surgery and Trauma 2014; 2(1): 25-28

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ORIGINAL ARTICLE

Prevalence of cesarean section and related causes of in women referring to Vali-e-Asr and tamin -e-ejtemaee hospitals in Birjand, 2010

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Received: March 18, 2014 ***Revised: May 28, 2014*** ***Accepted: June 1, 2014***

Abstract

Introduction: A growing number of children around the world are being born by surgical delivery, or cesarean section. Concerns about the steep increase in cesarean deliveries have been raised because of the possibility that surgical delivery is associated with greater maternal and infant mortality and morbidity than vaginal delivery. The purpose of the present study was to determine Prevalence of cesarean section and related causes of in women referring to Vali-e-Asr and tamin -e-ejtemaee hospitals in Birjand, 2010.

Methods: In this descriptive study, which cross-sectionally was carried out, 293 pregnant women referring to Vali-e-Asr and tamin -e-ejtemaee hospitals were studied. A questionnaire in 2 portions was filled out at mothers' bed, in delivery room, operation room, and women's ward. The obtained data was analyzed by SPSS software, using chi square test at the significant level P<0/05.

Results: From 293 pregnant women in this study 147 (50.2%) had a normal delivery and 146 (49.8%) by Cesarean. The most common causes for caesarean were cephalopelvic disproportion (22.4%), malpresentation (21.7%) and Failure to progress (16.8%).

Conclusions: In this study, the prevalence of caesarean section is more than the WHO standard. In order decrease the number of unnecessary cesarean, teaching the young pregnant mothers about the disadvantages of cesarean is necessary.

Key Words: Prevalence; causes; cesarean section

Introduction

Caesarean section is a commonly performed operation on women that is globally increasing in prevalence each year [1]. A analysis of global, regional and national estimates of births by Caesarean that published in 2007 revealed the following means and ranges: for the World as a whole 15% (0.4-40.5%), Africa 3.5% (0.4-15.4%), Western Asia 11.7% (1.5-23.3%), Europe 19.0% (6.2-36.0%), Latin America and the Caribbean 29.2% (1.7-39.1%), North America 24.3% (22.5-24.4%) and Oceania 14.9% (4.7-21.9%)[2]. This

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number reflects an increase in the primary cesarean rate and also a decrease in the rate of vaginal births after a prior cesarean, currently 9.2% [2,3]. According to revision of the World Health Organization (WHO) in 1994, acceptable caesarean section rates should be range between 5 and 15 percent [1]. The increase in Caesarean Delivery (CD) rate is of concern not only because of the associated higher morbidity and mortality compared to the vaginal route, but also for the effects on subsequent pregnancies and deliveries. Given the associated morbidity and mortality, it is imperative that a national strategy be considered to reduce at least some of the unnecessary CDs [2].

Investigating the prevalence of caesarean and its related factors in each area can be helpful in designing interventional strategies for decreasing rate of caesarean. Moreover, the reasons of caesarean may be different in various areas in accordance with access to welfare and cultural facilities. Therefore, the purpose of the present study was to determine Prevalence of cesarean section and related causes of in women referring to Vali-e-Asr and tamin -e-ejtemaee hospitals in Birjand, 2010.

Methods

In this descriptive study, which cross-sectionally was carried out, 293 pregnant women referring to Vali-e-Asr and tamin -e-ejtemaee hospitals in the second half of 2010 were studied. After ensuring that they were content with and cooperate in the study, a researcher designed questionnaire was filled out through interview. A questionnaire in two parts (demographic variables, causes of cesarean) was filled out at mothers' bed, in delivery room, operation room, and women's ward. Its validity is confirmed by content validity and its reliability is approved by using cronbachs alpha (r=0.5).The obtained data was analyzed by SPSS software (V: 18), using chi square test at the significant level P<0/05.

Results

The mean age of participants was 27.7±5.9. 86 % of women's were Housekeeper and 38.9% had high school education (table 1).From 293 pregnant women in this study 147 (50.2%) had a normal vaginal delivery and 146 (49.8%) by Cesarean. The most common indications for caesarean were cephalopelvic disproportion (CPD) (22.4%), malpresentation (21.7%) and The Failure to progress (16.8%) (Table 2). There was a significant relationship between place of living , type of hospital , age ,number of previous births and the method of delivery (P<0.05). There was no statistically significant relationship between rate of caesarean and the level of education and job (P>0.05).

Table 1: Distribution of demographic variables in women referring to Vali-e-Asr and tamin -e-ejtemaee hospitals in birjand

Variable		N	Percent
job	Homemaker	252	86
	Employed	41	14
Level of Education	No formal educational	21	7.2
	Primary school	80	27.3
	Pre high school	33	11.3
	High school	114	38.9
	Academic	45	15.3
place of living	city	207	70
	rural	86	30
Number of previous births	1	101	34.5
	2	89	30.4
	3	103	35.1
Age	<20	15	5.1
	21-35	233	79.5
	>35	45	15.4

Table 2: Distribution of causes of Cesarean in Vali-e-Asr and tamin -e-ejtemaee hospitals in Birjand

Causes	N	Percent
Previous cesarean	1	0.7
cephalopelvic disproportion	32	22.4
Fetal distress	7	4.9
Preeclampsia	1	0.7
Placenta previae	1	0.7
Detachment placenta	6	4.2
malpresentation	31	21.7
Multiple pregnancy	3	2.1
Other Maternal conditions	12	8.4
Failure to progress	24	16.8
Tubectomy	4	2.8
Other	21	14.7

Discussion

In the present study, the rate of caesarean is 49.8 %, while according to revision of the WHO in 1994, acceptable caesarean section rates should be range between 5 and 15 percent [1]. The results showed that the caesarean rate in vali-e-Asr and Tamin-e-Ejtemaee hospitals were 47.7 and 66.7 percent respectively. Therefore, the caesarean rate is 3 to 4 times more than WHO standards. The average rate of CS deliveries is 3.5% in Africa,

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15.9% in Asia, 19% In Europe, 29.2% in region Latin America and the Caribbean. Therefore, Rates are higher in developed countries and in Latin America and the Caribbean, but lower in other developing countries [4]. With the exception of Latin American and Caribbean countries, as well as a few countries in Asia, the majority of countries have CS rates below the recommended range of 10–15%.

In a study done by Rahmanianin Jahrom (2008), the prevalence of cesarean section was 32.21 % [5]. In another study conducted by Naseh in Birjand (2007) the rate of cesarean section was 40.3 % [6]. Also rate of cesarean section in Ardabil Province (2009)and Yasuj city (2003) were 54.6% and 26% respectively [7, 8].

The main point is that the rate of caesarean in Iran is higher than the WHO standards; therefore intervention programs are necessary to change women attitudes toward it and to increase the knowledge of painless delivery to reduce Cesarean.

In the present study, the most common causes for caesarean were CPD, malpresentation and Failure to progress.the most common indications for caesarean in four South East Asian countries (2005) were previous caesarean, CPD, malpresentation and fetal distress [1]. In Yasuj (2003) the most common causeswere previous caesarean, elective, CPD and fetal distress [8]. Also, In Jahrom (2008) the most common indications were previous caesarean, fetal distress, dystocia andCPD [5]. In all the above studies like the present study, CPD was one of the most common reasons for cesarean section.

The National Collaborating Centre for Women's and Children's Health (NCCWCH) with The Royal College of Obstetricians and Gynecologists (RCOG) (2004) guidelines list malpresentation, cephalopelvic disproportion and fetal distress as main indicators for caesarean section [9], consistent with the indications in Our study and the studies cited.

Previous caesarean section as an indication for caesarean section is not a recommendation of the NCCWCH/RCOG UK guidelines [9] was reported as minimal indicators for caesarean section in the present study.

Other NCCWCH/RCOG-recommended indicators for caesarean section including multiple pregnancy, mother to child transmission of disease, maternal request, placenta praevia and preterm or small for gestational age [9] was reported as minimal indicators for caesarean section in the present study.

In this study was a significant relationship between place of living and type of hospital,age,number of previous birthsand the method of delivery (P<0.05). So that the rate of caesarean is higher in urban than in village and in tamin-e-ejtemaee hospital higher than in educational hospital. In Naseriasl study (2009), there were significant relationship between cesarean section and type of hospital, residence area, age, number of children [7]; Perhaps because it is more access to health facilities in cities.On the other, Increased rates of chronic medical diseases and certainmaternal complications such as preeclampsia andgestational diabetes among women at advanced maternalage may have contributed to higher rates of cesareanbirth in this group [10].

In this study, there was no statistically significant relationship between rate of caesarean and the level of education and job (P>0.05). But in Naseh study (2007), there was a significant relationship between job, education level and the route of delivery (P<0.05) [6]. Also, In Naseriaslstudy (2009), there were significant relationship between cesarean section and education, employment [7].

Conclusions

In this study, the prevalence of caesarean section is more than the world standard. In order decrease the number of unnecessary cesarean, teaching the young pregnant mothers about the disadvantages of cesarean is necessary.

Acknowledgements

I'm sincerely grateful to Assistant Research, University of Birjand medical science especially Research Manager who help us in execute and conduct this research.

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