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Prenatal Care and Peripartum Complications in Delivered Women in Qazvin Hospitals

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ABSTRACT

By means of expanded national prenatal care program, pregnancy complications and maternal mortality are decreasing to achieve Millennium Development Goals in Islamic Republic of Iran. In this way, numbers of maternal visits by health professionals have increased significantly but in order to decline maternal mortality rate, we have to improve quality of cares. To assess prenatal care by scoring system and comparing scores of women with or without peripartum complications. We conducted a case-control study in which the case patients were 87 pregnant mothers with peripartum complications who admitted at Qazvin hospitals. Control group consisted of 87 mothers who admitted at the same hospitals for delivery without complications. Both groups have been followed up to 42 days after delivery. Their histories of prenatal care were entered into a questionnaire, completed by using their health files and interview. One point was allocated to each care item and sum of care scores calculated for each questionnaire. By using of nonparametric methods (Mann Whitney U, Chi sq.), we analyzed observed differences in means of care scores between case and control groups. Mean of prenatal care scores in the groups of mothers with or without peripartum complications were 26.13 ± 1.01 (95% CI, 24.1 to 28.2) and 30.01 ± 1.02 (95% CI, 28.0 to 32.0) respectively. A significant difference observed between mean scores of two groups ($p < 0.001$). Number of prenatal visits in mothers with or without peripartum complications was 12.59 ± 0.45 (95% CI, 11.68 to 13.0) and 11.61 ± 0.45 (95% CI, 10.70 to 12.51) and significant difference between them was not observed. Mothers without complications during their pregnancy and postpartum had better quality of care than complicated ones. In this study higher care score means better maternal cares which consist of standard medical exams during each prenatal care visit and laboratory and sonography examinations according to national protocol of maternal care. Increasing number of prenatal visits without attention to necessary medical exams can't improve maternal health more than present situation.

Key words: prenatal care, peripartum complication.

INTRODUCTION

Perhaps delivery is the most important health-related event in the lives of women. Nearly ten million women worldwide each year are complications of pregnancy and childbirth and nearly half a million of them die from this complication [1, 2]. In Iran until 2003 to support the vital horoscope, rural maternal deaths was estimated less than its actual level [3]. With addition the collection system of maternal mortality rates in hospitals and reform collecting statistics in 2003, the maternal mortality rate in one hundred thousand live births (MMR), Showed increasing trend until 2004.

Based on this statistics, more than 80 percent of maternal deaths occurred in hospitals in the country in 2006 [4]. Maternal mortality rate in one hundred thousand live births in Qazvin province increased from 8.5 percent to 32 percent of live births in 2001 to 2006 has increased and also less than 0.5% of births have been done outside the

hospital in Qazvin [5]. In accordance with our commitment to the Millennium Development Goals this rate by 2015, should reach about 23 percent in one hundred thousand live births [6].

A study on maternal mortality rate about pregnancy and childbirth complications in West Azarbaijan Province was conducted from 2004 to 2006 indicated that 36.9 percent of women have died in their care during pregnancy don't have Complete care during their pregnancy, while over 73 percent of them have received public cares [7].

According to the high proportion of childbirth in the hospital and complicated referral to hospital, examined the effects of peripartum complications that impending maternal mortality in admitted pregnant mothers in hospitals appears reasonable.

MATERIALS AND METHODS

This study was case-control research based on survey method. This study is based on the standard prenatal care in the health system and was designed based on the 12 kind of cares that in any medical examination for all pregnant women (finally each women 11 times were examine during her pregnancy). It was rated the quality of 12 cares (weight, blood pressure and cardiac auscultation and etc), the reference to filing and ultrasound examination and also the summary care records in hospital files were scored. Also the number of examinations performed during pregnancy by the workers, midwives, general practitioners and specialists were scored separately.

Higher care score in the without complications group will show that there is a positive relationship between care and morbidity reduction in pregnant women.

To calculate the sample size a pilot study was conducted by researchers. And the mean and standard deviation of the questionnaire in 30 admitted women in the Kosar hospital of Qazvin province was determined. Those respectively in 15 women had peripartum complication was calculated: 21.1 and 6.01 and in non peripartum complication women was calculated 23.84 and 6.33. Finally the sample size was determined 174 people in. Sampling was conducted in two stages. In the first stage each hospitals sample rate have been determined (table 1). In the second stage in each hospital we selected randomly one day in the week to visit and survey the peripartum complication women as treatment group. And also we selected the same number of non peripartum complication women as control group.

Table 1: Distribution of samples in the province's hospitals

Hospital name	Number of delivery in first six month of year	Percent	Sample size		
			Total	Treatment	Control
Kosar	4058	43.7	76	38	38
Razi Tamin Ejtemaei	1784	19.1	32	16	16
Dehkhoda	1563	16.7	30	15	15
Takestan Tamin Ejtemaei	1141	12.4	20	10	10
Pastor	476	5.2	10	5	5
Menin Bouin zahra	199	2.1	4	2	2
Rahimian Charity	79	0.8	2	1	1
Total	9300	100	174	87	87

Treatment groups in this study were women who had peripartum complication directly related to pregnancy (Preeclampsia, PROM, Fetal distress, POST DATE, Wound infection, Bleeding, UPPER UTI, Stillbirth, Preterm delivery) up to 42 days after delivery. Control group were women who had admitted in the hospital for delivery (delivery pain) or for elective caesarean in 38 to 42 weeks of pregnancy.

Exclusion criteria from the study: accidents, incident and suicide.

RESULTS

The results of descriptive statistics showed that the average mean of treatment group age was 25.3 ± 2.3 years old and the average mean of control group was 26.2 ± 3.6 years old. Also 17.2 percent of treatment women and 6.7 percent of control women were in less than 18 years old and more than 35 years old. 48.9 % of treatment respondent and 51.2 % of control respondent were city resident and isn't meaningful difference between location distribution of two groups.

There is meaningful difference between treatment and control groups about type of delivery so that 67.8 percent of treatment group and 27.5 percent of control group were Caesarean ($p < 0.001$). Significant difference in birth weight in both groups at 95% confidence was observed (the average weight of newborns in treatment group was 3003.2 grams and in control group was 3196.5 grams). 60.6 percent of respondent (72.4% of treatment group and 51.7% of

control group) were experiencing their first pregnancy and there were significant difference between numbers of pregnancy in both groups. ($p=0.016$).

39.4 percent of surveyed women had two or more than two pregnancy experience.

A significant difference observed between two groups (treatment group mean: 34.33 month and control group mean: 46.97 month) in the interval of two delivery of respondent so that mean of ($p=0.015$). The lowest mean scores of the care was observed in the care of late delivery and preeclampsia and stillbirth and the highest mean score of the care was observed in the premature rupture. Mean of prenatal care scores in the groups of mothers with or without peripartum complications were 26.13 ± 1.01 (95% CI, 24.1 to 28.2) and 30.01 ± 1.02 (95% CI, 28.0 to 32.0) respectively. A significant difference observed between mean scores of two groups ($p<0.001$). Number of prenatal visits in mothers with or without peripartum complications were 12.59 ± 0.45 (95% CI, 11.68 to 13.0) and 11.61 ± 0.45 (95% CI, 10.70 to 12.51) and significant difference between them was not observed. The minimum care score in control group was 12 and maximum care score was 67 in treatment group. There is a significant difference in the Patients care records in the hospital between two groups ($p=0.003$).

Table 2: The average care score in treatment and control group by peripartum complications

peripartum complications	Control group			Treatment group		
	Number	Average care score	S.D	Number	Average care score	S.D
Preeclampsia	-	-	-	19	23.73	6.64
Premature rupture	-	-	-	19	28.89	12.08
Fetal distress	-	-	-	16	28.06	12.22
Post Term	-	-	-	11	22.36	4.80
Wound infection,	-	-	-	8	26.12	12.46
Bleeding	-	-	-	6	24.50	5.35
UPPER UTI	-	-	-	5	26.20	4.54
Stillbirth,	-	-	-	2	32	0
Preterm delivery	-	-	-	1	28	-
Non complications	87	30.01	9.56	-	-	-

Discussion and conclusion:

The result of study showed that there isn't meaningful difference between treatment and control group age. Based on this study uncomplicated pregnant women had better care and attention during the pregnancy period. The most important necessity of prenatal care is prediction and prevention of complications and mortality and morbidity in this period. Definitions and standards of prenatal cares have been done based on the prevalence and significance of these complications and their symptoms, that by these cares we are expected to early detection and prevent of them. Pervious researches showed that even with notifying the prenatal care agenda and also taught about implementation them to service providers in public centers, unfortunately these instructions are not completely implemented and some mothers are eliminated and don't received complete care [8-13].

Table 3: standard medical exams during each prenatal care visit in two groups

Type of care during pregnancy	Percent in control group	Percent in treatment group	Total percent	Significance level (Chi Sq.)
History of care in the hospital file	68.3	46.2	57.2	0.003
Measurement of maternal weight	100	100	100	-
Measurement of maternal Height	69.1	53.2	61.1	0.022
Blood pressure Measuring in pregnant	100	98.3	99.1	0.249
Listen to fetal heart and lungs	34.4	34.4	34.4	0.563
Listen to fetal heart	97.2	95.3	96.2	0.5
Varicosities examined	52.4	40.5	46.4	0.085
Nutritional education	89.3	80.1	84.7	0.074
Individual health education	75.4	61.2	68.3	0.037
Postnatal health education	63.3	38.9	51.1	0.001
Education danger signs during pregnancy	76.4	64.1	70.2	0.068
Determination of gestational age	90.5	86.1	88.3	0.321
Education, warning signs postpartum	66.2	39.3	52.7	0.0000
Records of care in first trimester	87.5	74.4	80.9	0.029
Respect for hierarchy, referred	16.2	16.4	16.3	0.892
Care conditions but do not care about it	25.2	38.3	31.7	0.043
The first test in the first trimester of pregnancy	80.1	78.4	79.2	0.311
The first ultrasound in pregnancy second trimester	46.3	46.2	46.2	0.507
performed 12 standard service	34.5	32.4	33.4	0.545

In a descriptive research "Comprehensive Monitoring and Evaluation System" (IMES) in 2005 in Qazvin province that is down by "Office of Family Health and Population", Prenatal care services coverage were reported 99 percent

that 58 percent of surveyed people were benefited from public services. And also 96 percent of them were visited more than 6 times in pregnancy period and 57.9 percent of them have been suffering from complication of pregnancy [14].

The result of IMES survey showed that only 51 percent of pregnant women in Qazvin province give complete cares (checking vaccination history, taking supplements, Weight and height measurement, blood pressure measurement, Fetal heart, physical examination by a physician, Dental and Oral examination, Necessary tests and ultrasound). In this survey, in addition to inquiry of women their medical records were also studied and only 33 percent of them received complete care (12 cares).

Despite the fact that the treatment group had gained the maximum score, the mean and standard care for control group about "care during pregnancy", was significantly higher than treatment group. Thus uncomplicated group had taken better care.

In the beginning it seems increasing the number of visits will improve the quality of care and decrease peripartum complications. This result has been confirmed in a study in Pakistan. In that study, increasing the number of visits from 2 to 4 led to decreasing the pregnancy complications and deaths from pregnancy [15]. But in Qazvin province due to the high coverage in urban and rural care and also High number of prenatal checkups (according IMES study more than 94 percent of pregnant women are visited about 6 times) it does not seem these tests improves the quality of care and reduce complications during pregnancy. In the other hand providing the expanding facilities and education can reduce the distribution of examination.

In this research the mean of visits in pregnancy period was more than 11.6 times in total population. Also the improvement of care was more effective than increasing the number of examination in reduction of pregnancy complication. More over increasing the number of examination resulted in increase of costs and waste of clients and staff time or decrease the attention to each woman.

Respect the hierarchy of reference in pregnant women has been the weakest action and only about a third of surveyed pregnant women were benefit from all 12 cares and only in 34.4 percent of these individuals, heart examination has been down. Also this research indicated that only in 57.2 percent of surveyed people the history of prenatal care putted in to that hospital files. Therefore care information doesn't delivering timely to the physician and all this thing indicates that we need to do a full examination of pregnancy period and also need to create a comprehensive system of care for pregnant women in public and private sectors.

REFERENCES

- [1] Maternal mortality, Estimates developed by WHO, UNICEF and UNFPA, Maternal mortalit, **2000**
- [2] Maternal mortality, Estimates developed by WHO, UNICEF and UNFPA, **2005**.
- [3] B Delavar, Iran Ministry of Health, Treatment and Medical Education, Family Health Office. **2001**.
- [4] A Azemikhah, P Jalilvand, Iran Ministry of Health, Treatment and Medical Education, Maternal Health Office, **2004**.
- [5] Annual statistical reports of maternal care surveillance in Qazvin Province, Statistical archive, **1995-2007**.
- [6] Millennium Development Goals, WHO and World Bank, **1990- 2015**.
- [7] M Sadeghiani, *Uromia Medical Journal*, 13, **2003**, 282-285.
- [8] Transactions of Maternal Mortality Committee of Qazvin Province. Qazvin Provincial Health Center, **2003**.
- [9] B Nikpor, *Payesh Journal*. (2) 105-111:**2004**.
- [10] P Niknafas, A Ahmadi, *Pediatric disease Journal of Iran Medical University*, **2000**.
- [11] A Gashtasebi, *J Payesh*, 1, **2001**, 12-17.
- [12] A Al Yasin, J Abedi Asl, *Tehran Medical Faculty Journal*, 60,**2003**, 283-288.
- [14] F Kahnamoii, *Tabriz Medical University Journal*, 63, **2005**, 76-80.
- [15] Integrated Monitoring and Evaluation System Survey (IMES). Iran Ministry of Health, Treatment and Medical Education, Family Health Office, **2005**.
- [16] N Tasnim, G Mahmud, Arif Ms. *J Coll Physicians Surg Pak*. 15, **2005**, 26-9.