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Original article

Obstetric and perinatal outcome of primigravida patients in different age group

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Abstract :

The objective of this study was to evaluate the clinical profiles and outcome of primigravida patients in different age group.

Materials and method: This study was comparative study which was conducted in the department of Gynaecology and obstetrics, Dhaka National Medical College Hospital, Dhaka. Study period was taken from July 2009 to December 2009. 100 primigravid pregnant women from 36 weeks to 41 weeks in three different groups were included in this study. Group A (20-29 years) with 63 patients, group B (<20 years) with 11 patients & group C (>29 years) with 26 patients.

Results: All patients of three groups delivered within or near two years of marriage. In our study, percentage of caesarean section was quite high that is 46% of group A, 45% group B & 96% of group C women. In most cases of group A, LUCS were done due to foetal distress. In group B, due to CPD & in group C, were due to foetal distress and failed trial. Birth asphyxia was more in group B. IUGR was found in only group C about 4%. No significant difference was observed by distribution of pregnant women according to their perinatal morbidity.

Conclusion: This study showed teenage and elderly patients were suffered more from different complications. Elderly primigravid patients need comparatively more operative interferences for delivery of their babies . From this study, we should aware to avoid teenage pregnancy and should give special care for elderly primigravid woman during their pregnancy period and labour to achieve healthy mother and healthy foetus.

Key words: *Primigravida, Pregnancy and Foetal outcome*

Introduction

The age a women gives birth to her first child is influenced by various socio-economic, religious and complex cultural variables, which varies from nation to nation[1,2]. The first birth is often a significant event in a womens life and has a relationship to subsequent childbearing and other lifetime events such as education, sociopolitical status and proverty. Also, it has implications for the nations population dynamics[3.4], the infant and mother[5]. Pregnancy is a physiological condition but pregnancy in primigravida is a special situation because the outcome of pregnancy is unpredictable. There are various complications affecting the outcome in different age group. Elderly primigravida mother has many adverse consequences.[6,7,8,9,10]

Advanced maternal age has a strong association with an increased risk of various complication like hypertension, diabetes, intrauterine growth retardation, and congenital malformation. Pregnancy induced hypertension, abruption placenta, postmaturity, prolonged labour, malpresentation are the commoner indication for abdominal delivery in elderly primigravid women. [11,12,13]

Teenage mothers are the poor attenders for antenatal care which contribute to poor pregnancy outcome .[11,12] Premature delivery, low birth weight, intrauterine growth retardation, fetal death were seen more in younger teenage mother[11&14].Teenage pregnancy is also complicated by undernourished, anaemia, pre-eclamsia, eclamsia, obstructed labour.

Elderly primigravida are at higher risk of complication as compared to women in the younger age group. It has been shown that 81% of young primigravid mother had less antepartum complication than elderly primigravida [15,16&17]

Materials and method :

This study was comparative study which was conducted in the department of Gynaecology and obstetrics, Dhaka National Medical Institute Hospital, Dhaka. Study period was taken

from July 2009 to December 2009. 100 primigravid pregnant women were taken from 36 weeks to 41 weeks in three different groups. Group A (20-29 years) with 63 patients, group B (<20 years) with 11 patients & group C (>29 years) with 26 patients. A structured questionnaire was used to interview the woman Clinical findings, laboratory investigation report ,delivery and baby note was collected from the patient's record. Informed written consent was taken from each participant and sample size was finalized after primary screening with inclusion and exclusion criteria.

Inclusion criteria :

Primigravid patients during their last trimester of pregnancy of different age group.

Exclusion criteria:

i. Any previous history of diabetes, chronic renal failure, hypertension or any other cardio vascular diseases.

ii. Women less than 15 years old

iii. Patient who could not mention her last menstrual period accurately

Results:

Table-1: Distribution of woman according to occupation.

Occupation	Group		
	Group A (20-29 year)	Group B (<20 year)	Group C (>29 year)
House wife	55 (87.3)	9 (81.8)	18 (69.23)
House maid	2 (3.2)	2 (18.2)	0
Daily labour	2 (3.2)	0	0
Service holder	4 (6.3)	0	8 (30.77)
Total	63 (100.0)	11 (100.0)	26 (100.0)

The table- shows that most of the women were housewife in all groups. Service holder of group C is remarkable high (30.77%) comparing group A & B.

Table-2: Distribution of woman according to planned and unplanned pregnancy.

Present Pregnancy status	Group			P value*
	Group A (20-29 year)	Group B (<20 year)	Group C (>29 year)	
Planned	51 (81.0)	3 (27.27)	22 (84.62)	0.001
Unplanned	12 (19.0)	8 (72.72)	4 (15.38)	
Total	63 (100.0)	11 (100.0)	26 (100.0)	

The table-shows that in group A and group C planned pregnancy rate were high. On the other hand, unplanned pregnancy were high in group B. Significant difference was observed by distribution of women according to planned and unplanned pregnancy ($p<0.05$).

Table-3: Distribution of pregnant woman according to antenatal check up.

Antenatal check up	Group			Pvalue*
	Group A (20-29 year)	Group B (<20 year)	Group C (>29 year)	
Regular	55 (87.3)	8 (72.73)	25 (96.15)	0.129
Irregular	8(12.7)	3 (27.27)	1 (3.85)	
Total	63 (100.0)	11 (100.0)	26 (100.0)	

Regarding the antenatal check up, it was observed that maximum patients had regular antenatal checkup in all groups. No statistical significant difference was observed by antenatal check up of regular and irregular case ($p<0.05$).

Table-4: Distribution of pregnant woman according to their duration of marriage.

	Group			Pvalue*
	Group A (20-29 year)	Group B (<20 year)	Group C (>29 year)	
Duration of marriage (in month)	28.54±18.74	16.55±7.55	18.60±9.12	0.001

Significant difference was observed by distribution of pregnant women according to their duration of marriage ($p<0.05$).

Table-5: Distribution of patient according to their complications in present pregnancy

Complications	Group		
	Group A (n=63)	Group B (n=11)	Group C (n=26)
Hyperemesis gravidarum	2(3.17)	1(9.09)	2(8.0)
Preeclampsia	1 (1.56)	0 (.0)	2(7.69)
Eclamsia	0(0)	1 (9.09)	0(0)
PIH	4 (6.35)	0(0)	6(23.68)
GDM	0 (0)	0(.0)	1(3.85)
PROM	1 (1.56)	1(0)	1(3.85)
Oligohydramnios	1(1.56)	1(.0)	2(8)

The table illustrates that in most of the complications were observed in group-C, woman with more than 29year age.

Table-6 Distribution of pregnant woman according to their mode of delivery.

Mode of delivery	Group			P value*
	Group A (20-29 year)	Group B (<20 year)	Group C (>29 year)	
NVD	34 (54.0)	6(54.55)	1(3.85)	0.001
LSCS	29 (46.0)	5 (45.45)	25 (96.15)	
Total	63 (100.0)	11 (100.0)	26 (100.0)	

The table describes that in group C more patients needed to operative delivery and group A & B maximum patients had NVD. Significant difference was observed by distribution of pregnant women according to their mode of delivery ($p<0.05$).

Table-7: Distribution of patient according to their indication of LSCS.

Indication of LSCS	Group		
	Group A (n=29)	Group B (n=5)	Group C (n=25)
Prolonged labour	1 (3.45)	0 (.0)	2(8.0)
Malpresentation	3 (6.90)	0 (.0)	0(.0)
Malposition	2 (6.90)	0 (.0)	1(4.0)
CPD	3 (10.34)	2 (40.0)	1(4.0)
Foetal distress	9 (31.03)	0 (.0)	8(32.0)
Failed trial	6 (20.69)	1 (20.0)	6(24.0)
Cervical dystocia	2 (6.90)	0(.0)	8(32.0)
PE	1 (3.45)	0(.0)	2(8.0)
PIH	1 (3.45)	0(.0)	3(12.0)
Eclampsia	0 (.0)	1(.20)	0(.0)
Obligohydramnios	1(3.45)	1(20.0)	2(8.0)

The table illustrates that in most cases of group A, LUCS were done due to foetal distress. In group B, due to CPD (cephalo-pelvic disproportion) & in group C, were due to foetal distress and failed trial.

Table-8: Distribution of pregnant woman according to their perinatal outcome

Perinatal outcome	Group			P value*
	Group A (n=63)	Group B (n=11)	Group C (n=26)	
Apgar score in at1st min <6	14(22.22)	4(36.36)	9(34.62)	0.371
>6	49(77.78)	7 (63.64)	17(65.38)	0.371
Apgar score at 5th min <7			2 (7.69)	0.371
>8	4(6.35)	2(18.18)		0.409
Birth asphyxia			24 (92.31)	0.593
	59(93.65)	9 (81.82)	4(15.38)	
IUGR	6 (9.52) 0 (.0)	2 (18.18) 0 (.0)	1 (3.85)	

Table shows maximum babies in all groups had APGAR score >6 at 1st minute. Birth asphyxia was more in group B about 18% and group C about 15%. IUGR was found in only group C about 4%. No significant difference was observed by distribution of pregnant women according to their perinatal outcome ($p<0.05$)

Discussion :

This comparative study was conducted in the department of Gynaecology and obstetrics, Dhaka National Medical Institute Hospital, Dhaka from July 20009 to December 2009. Total 100 primigravid pregnant women were selected from 36 weeks to 41 weeks in three different groups. Group A (20-29 years aged women) with 63 patients, group B (<20 years aged women) with 11 patients & group C (>29 years aged women) with 26 patients). Maximum respondents of the study were from urban area. In this study, all patients of three groups delivered within or near two years of marriage. This finding is comparable with the findings of Sivalingam and Avalani series.[13]

In this study 7.69% elderly primigravida had pre-eclampsia, 23.68% pregnancy induced hypertension. 9.09% teenage pregnancy had eclampsia, control age group had 1.56% preeclampsia and 6.35% pregnancy induced hypertension. This finding is comparable with the findings of (Kane & Prysak et al.) [6&18.] They found pregnancy induced hypertension in 25-29 years old group is 7%. The incidence of chronic hypertension increases with age. In this study, it was

found that pre-eclampsia & pregnancy induced hypertension were significantly higher in group-C (29 years) woman. Kane & Prysak et al. [6&18.] found that by the age of 35 years these incidences doubled to about 14%. This findings is also similar with the findings of Bobrowski & Bottoms. [19] This study shows 3.85% pregnant women of more than 30 years had developed gestational diabetes, whereas none from the below this age group had developed Gestational diabetes. In our series 3.17%, 1.56%, 1.56% group A had hyperemesis gravidarum, oligohydramnios and premature rupture of membrane (PROM) respectively. Most of the complication were observed in group-C, woman with more than 29 year age.

In our study, the mode of delivery was comparable with the other researchers findings. We found percentage of caesarean section is quite high that is 46% of group A, 45% group b & 96% of group C. Piper et al.; Peipert & Bracken, Bianco et al.; Irwin et al. [20,21,22&23]had almost similar findings. In most cases of group A, LUCS were done due to foetal distress, in group B, due to CPD (cephalo-pelvic disproportion) & in group C, were due to foetal distress and failed trial.

Maximum babies in all groups had APGAR score >6 at 1st minute. No significant difference was observed by distribution of pregnant women according to their perinatal outcome. Birth asphyxia was more in group B about 18% and group C about 15%. IUGR was found in only group C about 4%. No significant difference was observed by distribution of pregnant women according to their perinatal morbidity in the case of birth asphyxia ($p<0.05$).

Conclusion:

This study showed teenage patients were suffered from different complication like malnutrition, anemia, eclampsia, cephalopelvic disproportion, and their babies also become low birth weight. On the other hand elderly primigravid are also suffer from different complicantions like pre-eclampsia, Pregnancy induce hypertension, gestational diabetes mellitus, prolong labour and their baby also suffer from foetal distress, intra uterine growth restriction and birth asphyxia. But in average age group the sufferings from such complications has occurred comparatively less. Elderly primigravid patients need comparatively more operative interferences for delivery of their babies than control age group. From this study, we should avoid teenage pregnancy and should give special care for elderly primigravid woman during their pregnancy and labour to achieve healthy mother and healthy foetus. The study has some limitations. It was carried out in a small group of patient. To arrive at a definite conclusion it needed long term well designed clinical trial with a higher sample size will be carried out to assess different aged primigravid woman and their outcome.

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