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Comparative study of outcome of obstructed labour between primi gravidae and multi gravidae: A study in Dhaka medical college hospital, Dhaka, Bangladesh

Shah Mohammad Hassanur Rahman[1*], Ayesha Siddiquea[2], Abeda Sultana[3]
[1] Junior Consultant (Obs & Gynae), Pakundia Upazila Health Complex, Pakundia, Kishoreganj, Bangladesh
[2] Junior Consultant (Obs & Gynae), Sreepur Upazila Health Complex, Sreepur, Gazipur, Bangladesh
[3] Junior Consultant (Obs & Gynae), Palash Upazila Health Complex, Narshingdi, Bangladesh

Abstract
Introduction: Obstructed labour is one of the major causes of maternal mortality (8%) in Bangladesh1. It is also responsible for high rate of maternal and fetal morbidity, if we can identify causes of obstructed labour, determine the outcome & complications in our country it may be helpful to find out the way to prevent this disease.
Objective: This study is a prospective observational study has been done in Dhaka Medical Collage Hospital, Dhaka from 1st July to 31st December 2007. Hundred patients who were admitted with obstructed labour during study period were included in this study.
Methods: In this study incidence of obstructed labour was 2.65%. The clinical profile of the patients reveals, (53%) within 20-30 years, only 4-6% were on regular antenatal checkup, maximum (84-90%) patients came from poor socioeconomic condition, (88-96%) patients did not cross primary education level, most of them were housewife (82-92%) & maximum patients husband were daily labourer. On admission general examination revealed that majority were exhausted with rapid pulse, raised temperature, anaemic and were dehydrated
Results: The medical causes of obstructed labour in the study population were cephalopelvic disproportion 42-46%, 50% cases were due to malposition & malpresentatron, mode of delivery were LSCS in 76-90%, craniotomy in 6-10%, Subtotal hysterectomy in 2-G%, repair of uterus with bilateral salphingo oophorectomy in 2-4%. The postoperative complications in my study population were postpartum hemorrhage 13-20%, puerperal sepsis 16-18%, paralytic ileus 20-24%, wound infection 36-44%, burst abdomen 2%, obstetric palsy 2% & V.V.F 4=8%. Maternal outcome was healthy 32-40%, mortality 4% and morbidity 56-64% perinatal outcome was healthy 54-62% & mortality 38-46%.
Conclusion: So obstructed labour is a tragic consequence of pregnancy resulting from ignorance and negligence.

Keywords: obstructed labour, cephalopelvic disproportion, Subtotal hysterectomy, outcome

1. Introduction

In almost all developing countries, maternal mortality remains one of the five leading causes of death among reproductive age women, it is an important public health problem not only because of the large number of such mortality, but also because of the traumatic effect of such an event on the family and the community as a whole. Each year more than half a million women (529,000 estimated in 2000) die from preventable pregnancy-related causes. An estimated 99% of such deaths occur in developing countries. Obstructed labour is a life threatening obstetric complication associated with significant maternal and fetal morbidity and mortality. It is one of the most common preventable causes of maternal and perinatal morbidity and mortality in developing countries. For example, in Bangladesh obstructed labour was found to be the third most common cause of maternal mortality in one study. The causes of the maternal mortality in Bangladesh are abortion (21%), postpartum hemorrhage (25%), obstructed labour (8%), puerperal sepsis (11%), eclampsia (16%) and other obstetric cases (19%).Obstructed labour was the cause of 11.3% of maternal deaths in a report from Bangladesh [1], 26,2% in a community-based study in Uganda, and 45.5% in a hospital based study from southwestern Ethiopia. The cause of obstructed labour in Ethiopia cephalopelvic disproportion was responsible for 80.6%, shoulder presentation for 11.5% and other Representation the remaining. Obstructed labour was the second most important cause of perinatal death in Addis Ababa, Ethiopia being responsible for 9.1 perinatal deaths/100 births13. Most obstructed labour was due to cephalopelvic disproportion. There was a nine fold increase in the perinatal death rate when the patients were anaemic but most perinatal deaths were due to delays in seeking available obstetrical care. A study done by [2], BSMMU in Bangladesh (2002) where the incidence of obstructed labour was 5.22% and 56% of them in the age group between 21-30 years. 54% patient was primigravida and 46% were multiparous. Only 34% populations were under antenatal checkup (regular/ irregular). The medical causes of obstructed labour in her study were cephalopelvic disproportion in 33%, representation in 26%, malposition in 41%, 92% cases needed LSCS, craniotomy 1% and subtotal hysterectomy 7%. -Still born and asphyxiated baby were 38% and 50% respectively. In India focused up to the obstructed labour cases that the incidence of labour was 72.8% in the group between 21-30 years [3]. 98.57% patients came from lower socioeconomic class. Still born was 24.29% cases and maternal death was 2.85% cases. In their study on obstetrics-past and present, focused upon the disparity between developed and developing countries in levels of maternal and perinatal mortality [4]. In her study incidence of obstructed labour was 3.59% Mode of delivery were LSCS in 85% [5].

Craniotomy in 9% and evisceration in 4% maternal outcome was WF in 7% and puerperal sepsis in 18% postpartum haemorrhage 17%. Perinatal death was 45% and MMR was 3% due to obstructed In Bangladesh maternal mortality rate is still very high, about 3.2 per thousand live births. Even in the 21st century, obstructed labour still remains- life threatening catastrophe all over the world mostly in the developing countries like Bangladesh. Obstructed labour is one of the major causes of maternal death in our country (8%). This entirely preventable labour complication carrying a very high maternal and neonatal morbidity and mortality is an indicator of the inadequacy and poor quality of obstetric care. Obstructed labour results from unfavorable relation between maternal pelvis and fetus. Every pregnancy and labour is risky and need careful supervision supported by health facilities to avoid maternal and fetal demise, In our country 30% people live in rural areas where most deliveries 90% are conducted at home, TBAs conduct 63% of deliveries of which 38% are conducted by untrained TBAs and 25% by trained ones (S1RPFRHT 1995). The effect of these deliveries is reflected in the form of high maternal and foetal mortality and morbidity in our country. A community based survey on health status of pregnant women in Kushtia m 1997 reveals that (67%) of teensne village girls are becoming pregnant below the age of 18 years and facing the disaster of unsafe delivery. This adverse maternity situation is aggravated 5y malnutrition. Thus when such malnourished teenage girl becomes pregnant before their pelvis are adequate for childbirth they fail in the curse of obstructed labour. In Dhaka medical College Hospital, about 1-2 patients are admitted with obstructed labour every day. The number is relatively high as it is tertiary level hospital and patient from different areas with labour complication are referred here for proper management. The causes of obstructed labour are not only the medical causes but also have some social causes. The medics; causes are mainly Cephalopelvic disproportion, malposition, representation, big pelvic tumor, congenital malformations of the fetus (hydrocephalus). Poverty, social and cultural prejudices, gender based violence, lack of education and less access to essential health care facilities also contribute to obstructed labour. In Bangladesh a majority of women who escaped from death due to obstructed labour suffer from very distressing morbidities. Obstructed labour is an important cause of obstetric fistula like V.V.F, R.V.F, ruptured uterus, vaginal stenosis and prolapse uterus. Obstructed labour also brings o major impact on fetal outcome. They may die in utero, are delivered with severe asphyxia. When they are delivered in rural areas at home with no facility for immediate resuscitation, neonatal death may occur perinatal mortality (52 per 1009 birth) is still high in Bangladesh and majority is due to birth asphyxia. The sequence of perinatal asphyxia is cerebral palsy, mental retardation. Extensive thinking and interventions are going on particularly about the community based activities for improving maternal and neonatal health. Thus to make motherhood safe, steps should be taken to improve community based services and to plan active intervention before any more mothers succumb to complication of pregnancy and labour. Mother and baby package initiatives are also being advocated in order to reduce maternal death, perinatal death as well as maternal morbidity. This study has revealed maternal & fetal condition and various complication of obstructed labour. The results of tills study may help to reduce the incidence of obstructed labour.

2. Aims & Objectives of the Study

a. To determine the outcome of obstructed labour between primi gravidae and multi gravidae.
b. To determine the incidence of obstructed labour in DMCH.
c. To identify the risk factors for obstructed labour.
d. To compare the maternal and fetal condition in case of obstructed labour between primi gravidae and multi gravidae.
e. To compare the mode of delivery in these cases,
f. To detect maternal and fetal complications in cases of obstructed labour,
g. To give recommendation regarding prevention of development of obstructed labour.

3. Materials & Methods

Study Design: This is a prospective study

Place of study: The study was done in Department of obstetrics and Gynaecology, Dhaka Medical College Hospital.

Time of study: Study period was between from 1st July to 31st December, 2007.

Study population and sample size: Among all the patients admitted with obstructed labour in all units of Gynae & obstetric department in Dhaka Medical College Hospital, 100 patients were selected for the study according to following criteria.

Inclusion criteria

1. Patients with term pregnancy i.e. completed 37 weeks gestation.
2. History of prolonged labour in spite of good uterine contraction.
3. Arrests of progressive descend of presenting part.
4. Fully or incompletely dilated cervix,
5. Presence of large caput over presenting part.

Exclusion criteria

1. Pregnancy less than 37 completed weeks.
2. Pregnancy with other medical disorders.
3. Patients with antepartum haemorrhage.

Data collection: After admission of patient, history was taken and clinical examination was done. The data was collected personally through a prepared questionnaire. Patient and baby were followed up during delivery and postpartum period upto discharge,

Data processing and tabulation: Data processing and tabulation by hand tabulation, calculations were done on scientific calculation. Comparison between primi gravidae and multi gravidae were made using Chi-Square test or unpaired students't' test as applicable. A p value <0.05 was taken as minimum level of significance.

4. Results

The medical causes of obstructed labour in the study population were cephalopelvic disproportion 42-46%, 50% cases were due to malposition & malpresentatron, mode of delivery were LSCS in 76-90%, craniotomy in 6-10%, Subtotal hysterectomy in 2-G%, repair of uterus with bilateral salphingo oophorectomy in 2-4%. The postoperative

complications in my study population were postpartum hemorrhage 13-20%, puerperal sepsis 16-18%, paralytic ileus 20-24%, wound infection 36-44%, burst abdomen 2%, obstetric palsy 2% & V.V.F 4=8%. Maternal outcome was healthy 32-40%, mortality 4% and morbidity 56-64% perinatal outcome was healthy 54-62% & mortality 38-46%.

Table 1: Incidence of obstructed labour (N=100)

Total number of deliveries	Total number of cases of obstructed labour	Percentage (%)
4525	120	2.65

[Table-1] showed that incidence of obstructed labour in our hospital population of patients during this study period was 2.65% Out of 120 cases, 100 cases were included on this study. They are divided into primi gravidae 50 cases and multi gravidae 50 cases.

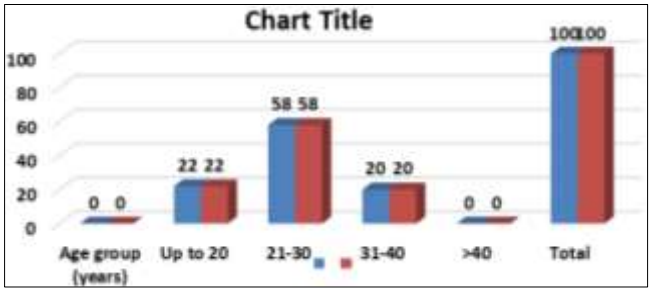

Fig 1: Age distribution of patient

[Figure-1] showed that 22% of the study population were in the age group of up to 20 years. 58% in the group 21-30 years and 20% in the group of 31-40 years.

Table 2: Socio-economic status of the patient (N=100)

Socio economic status	Primigravidae n = 50	Multi gravidae n = 50	P value
Poor	42 84)	45 90)	> 0.05^{ns}
Average	7 (14)	5 (10)	
Good	1 (2)	nil	

[Table-2] revealed that maximum study population i.e. 84% in primi gravidae and gravidae and 10% in multi gravidae had come from medium socio economic group and only 2% in case of primi gravidae came from good economic classes. Socioeconomic conditions: Poor: whose monthly income is below 3,000 BDT. Average: whose monthly income is 3,001-5,000 BDT. Good: whose monthly income is above 5,000 BDT.

Table 3: Level of education of the patient (N=100)

Education level	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Nil	28 (56)	34 (68)	> 0.01^{ns}
Primary	16 (32)	14 (28)	
Secondary	5 (10)	2 (4)	
Higher	1 (2)	Nil	

[Table-3] revealed that 56% in primi gravidae and 68% in multi gravidae of study population did not cross primary education level.

Table 4: Occupation of the patient (N=100)

Occupation	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Housewife	41 (82)	46 (92)	> 0.05^{ns}
Service holder (Garments worker)	3 (6)	1 (2)	
Maid servant	3 (6)	1 (2)	
Day labourer	2 (4)	2 (4)	

[Table-4] showed that most patients were housewife 82% in case of primi gravidae and 92% in multi gravidae.

Table 5: Occupation of the patient's husband (N=100)

Occupation	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Service holder	7 (14)	3 (6)	> 0.05^{ns}
Businessman	2 (4)	3 (6)	
Day labourer	28 (56)	36 (72)	
Farmer	13 (26)	8(16)	

[Table-5] showed almost half 56% in primi gravidae and 72% in multi gravidae of study population's husbands were daily labourer.

Table 6: Anteneatal checkup (N=100)

Antenatal check up		Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Yes	Regular	2(4)	3(6)	>0.01^{ns}
	Irregular	15(30)	17(34)	
No		38(66)	30(60)	

[Table-6] showed that only 4% in primi gravidae and 6% in multi gravidae patients were on regular antenatal check up 30% primi gravidae and 34% in multi gravidae patients were on irregular antenatal check up 66% primi gravidae and 60% in multi gravidae patients had no antenatal check up

Table 7: Patient referred by (N=100)

Referred by	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
T.B.A	11 (22)	9 (18)	> 0.00
Doctors	3 (6)	4 (8)	
Nurse	2 (4)	3 (6)	
Relative	27 (54)	25 (50)	
Midwife	7 (14)	9 (18)	

[Table-7] showed that most of the patients were referred by relatives 54% in primi gravidae and 50% in multi gravidae 22% in primi gravidae and 18% in multi gravidae referred by T.B.A 14% in primi gravidae and 18% in multi gravidae referred by Midwives 6% in primi gravidae and 8% in multi gravidae referred by Doctors 4% in primi gravidae and 6% in multi gravidae referred by Nurse None was by self.

Table 8: Duration of labour pain prior to admission (N=100)

Duration of labour	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
12-24 hours	26 (56)	23 (46)	> 0.10^{ns}
25-48 hours	16 (32)	22 (44)	
>48 hours	6 (12)	5 (10)	

[Table-8] revealed that 56% in primi gravidae and 46% in multi gravidae of the study population came to hospital within 12-24 hours of labour pain, 32% in primi gravidae and 44% in multi gravidae of patients came within 25-48 hours

Table 9: Patients general condition on admission (N=100)

Maternal condition		Primi gravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Pulse	<100	16(32)	18(36)	>0.10^{ns}
	>100	34(68)	32(64)	
Temperature	Normal	19(38)	16(32)	>0.10^{ns}
	Raised	31(62)	34(68)	
Anaemia	Mild	13(26)	6(12)	>0.01^{ns}
	Moderate	33(66)	7(14)	
	severe	4(8)	27(54)	
Dehydration	Mild	11(22)	7(14)	>0.05^{ns}
	Moderate	25(50)	27(54)	
	Severe	14(28)	16(32)	
Colour of urine	Normal	4(8)	5(10)	>0.01^{ns}
	Haematuria	6(12)	7(14)	
	High coloured	40(80)	38(76)	
Bladder distended	Yes	48(96)	47(94)	>0.10^{ns}
	No	2(4)	3(6)	

Table 10: Fatal condition on admission (N=100)

Fatal condition		Primi gravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Fetal heart sound	Normal	5(10)	3(6)	>0.025^{ns}
	Distressed	38(76)	39(78)	
	Absent	7(14)	8(16)	
Caput	Present	46(92)	40(80)	>0.025^{ns}
Meconium stained liquor	Present	40(80)	42(84)	>0.10^{ns}
	Absent	10(20)	8(16)	

[Table-10] showed in majority cases 76% in primi gravidae and 78% in multi gravidae fetal heart sound defected on admission and in almost all cases 92% in primi gravidae and 80% in multi gravidae caput were formed 80% in primi gravidae and 84% in multi gravidae cases were meconium stained liquor.

Table 11: Reasons for trial at home delivery (N=100)

Causes	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Ignorance	18(36)	20(40)	0.00
Husband or other family members did not agree to bring to the hospital	12(24)	13(26)	
Patient herself did not agree to come to hospital	6(12)	5(10)	
Distance between home to health center and tertiary hospital	5(10)	4(8)	
To avoid operative delivery	4(8)	5(10)	
Due to economic constraints	5(10)	3(6)	

[Table-11] illustrated that most frequent reason for attempted home delivery was ignorance 36% in primi gravidae and 40% multi gravidae. In 24% in primi gravidae and 26% multi gravidae cases husband or other family members did not agree to bring the patients to hospital.

Table 12: Causes of obstructed labour (N=100)

Causes of obstructed labour	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Cephalopelvic disproportion	23	21(42)	0.00
Persistent occipital-posterior position	14	12(24)	
Deep transverse arrest	5	8(16)	
Shoulder presentation	3	3(6)	
Face presentation	2	3(6)	
Breech presentation	2	3(6)	
Cervical fibroid	1	Nil	

[Table-12] show the causative factors of obstructed labour, 46% in primi gravidae and 42% multi gravidae cases were due to cephalopelvic disproportion with varying degrees of contracted pelvis, 52% in primi gravidae and 58% multi gravidae cases caused by malpositions and malpresentations, 2% in primi gravidae was due to cervical fibroid.

Table 13: Mode of management (N=100)

Mode of management	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Lower segment caesarean section			>0.025ns
LSCS	45(90)	34(68)	
LSCS with BLTL	00	4(8)	
Management of ruptured uterus			
Repair of ruptured uterus	1(3)	2(4)	
Repair of ruptured uterus with BLTL	1(3)	3(6)	
Craniotomy	3(6)	5(10)	

[Table-13] illustrated that maximum of the patient 90% in primi gravidae and 76% multi gravidae were delivered by LSCS, craniotomy in 6% in primi gravidae and 10% multi gravidae, subtotal hysterectomy in 2% in primi gravidae and 6% multi gravidae and repair of rupture uterus 2% in primi gravidae and 8% multi gravidae.

Table 14: Genital tract injury of mother before or during delivery (n=10 in primi gravidae and 14 in multi gravidae) (N=100)

Type of injury	Primi gravidae	Multi gravidae	P value
Rupture of the uterus	2(4)	5(10)	>0.01ns
Cervical tear	1(2)	1(2)	
Vaginal laceration	5(10)	6(12)	
V.V.F	2(4)	3(6)	

V.V.F = Vesico vaginal fistula

[Table-14] showed that 10% in primi gravidae and 12% multi gravidae, of patient had vaginal laceration, another 4% in primi gravidae and 10% multi gravidae of patient and ruptured uterus, 2% in primi gravidae and 2% multi gravidae had cervical tear & 4% in primi gravidae and 6% multi gravidae had V.V.F, 80% in primi gravidae and 70% multi gravidae of patient had no injury.

Table 15: Condition of uterus per operatively (N=100)

Condition of uterus	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Normal	42(84)	39(78)	>0.025ns
Impending rupture	6(12)	7(14)	
Ruptured	2(4)	4(8)	

[Table-15] showed that uterus was intact in 84% in primi gravidae and 78% multi gravidae; 4% in primi gravidae and 8% multi gravidae presented with ruptured uterus & another 12% in primi gravidae and 14% multi gravidae had impending rupture. Impending rupture was diagnosed per-operatively.

Table 16: Total maternal outcome (N=100)

Outcome	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Healthy	20(40)	16(32)	>0.01ns
Morbidity	28(56)	32(64)	
Mortality	2(4)	2(4)	

[Table-16] showed 40% in primi gravidae and 32% multi gravidae patients were healthy, morbidity rate 56% in primi gravidae and 64% multi gravidae and maternal mortality rate was 4% in primi gravidae and 4% multi gravidae.

Table 17: Post-operative complications (N=100)

Maternal outcome	Primi gravidae	Multi gravidae	P value
Immediate	9(18)	11(22)	>0.01ns
Post-partum haemorrhage puerperal sepsis	8(16)	9(18)	
Paralytic ileus	10(20)	12(24)	
Wound infection	18(36)	22(44)	
Obstetric palsy	1(2)	1(2)	
Burst abdomen	0	1(2)	
Late Vesico vaginal fistula	2(4)	3(6)	

[Table-17] showed that there were some overlapping of complications among the patients. Postpartum haemorrhage 18% in primi gravidae and 22% multi gravidae pyrexia 16% in primi gravidae and 18% multi gravidae, paralytic ileus 20% in primi gravidae and 24% multi gravidae and wound infection 36% in primi gravidae and 44% multi gravidae were common complication among the patients. Other complication were burst abdomen 2% multi gravidae, paresis of lower limb 2% in primi gravidae and 2% multi gravidae.

Table 18: Adjuvant procedure (N=100)

Adjuvant procedure for complication	Primigravidae n = 11	Multi gravidae n = 15	P value
Subtotal hysterectomy	1(9.1)	3(20)	
Intrauterine hydrostatic balloon catheter	10(90.9)	12(80)	>0.25 ns

[Table-18] showed that in 90.9% in primi gravidae and 80% multi gravidae cases intrauterine hydrostatic balloon catheter done for PPH.

Table 19: Saquelae of ruptured uterus (N=100)

Sequelae	Primigravidae (n=1)	Multi gravidae (n=5)	P value
Subtotal hysterectomy followed by complete recovery	1(100)	3(60)	Significant
Repair of uterus & bilateral salphingo oophorectomy		2(40)	

[Table-19] There were total 6 patients with ruptured uterus among them 1 was (100%) in primi gravidae recovered after hysterectomy among rest 5 patients were multi gravidae and 3(60%) recovered after hysterectomy and 2(40%) recovered from repair of uterine rupture.

Table 20: Cause of maternal death (n=4)

Cause of death	Primigravidae (n=2)	Multi gravidae (n=2)	P value
Haemorrhagic shock	1(50)	1(50)	0.00
Septicaemic shock	1(50)	1(50)	

[Table-20] showed that total no. of death was 4 out of total study population. 2 were primigravidae 2 were multi gravidae, age within 21-30 years, duration of labour pain varies from 12-48 hrs. Their mode of delivery were LSCS. Among primi gravidae the first patient died from septicaemic shock on 6th postoperative day and second patient had haemorrhagic shock due to PPH within 24 hrs of operation. Among multi gravidae first patient died from haemorrhagic shock due to PPH on 1st postoperative day and second one due to septicaemic shock on 2nd post-operative day. The uterus was atonic per-operatively and appropriate measure were taken by uterine artery ligation and B-lynch brace suture and blood was transfused but the patient want to irreversible shock.

Table 21: Fetal outcome at birth (N=100)

Fetal outcome		Primigravidae n=50 No (%)	Multi gravidae n=50 No (%)	P value
Live birth	Healthy	10(20)	8(16)	>0.01ns
	Asphyxiated	32(64)	28(56)	
Still Birth		8(16)	14(28)	

[Table-21] showed that more than half of the babies 64% in primi gravidae and 56% multi gravidae were asphyxiated baby and significant no of babies 16% in primi gravidae and 28% multi gravidae were still born (Maximum were fresh fresh still born).

Table 22: Total fetal outcome at the time of discharge (N=100)

Fetal outcome	Primigravidae n = 50 No (%)	Multi gravidae n = 50 No (%)	P value
Healthy baby	31(62)	27(54)	>0.01ns
Stillbirth	8(16)	14(28)	
Early neonatal death	11(22)	9(18)	

[Table-22] showed there was stillbirth 16% in primi gravidae and 28% multi gravidae of patients. Early neonatal death was 22% in primi gravidae and 18% multi gravidae, 62% in primi gravidae and 54% multi gravidae babies were healthy during discharge.

5. Discussion

This study was aimed to observe the ill effects of obstructed labour on mother and fetus in our circumstances. At the beginning of new millennium modern obstetrics has developed a great but in developing countries like Bangladesh obstructed labour still remains a great challenge. Obstructed labour is one of the important causes of maternal and perinatal mortality and morbidity in our country. It is a tragic consequence of pregnancy resulting from ignorance and negligence. Worldwide, obstructed labour occurs in an estimated 5% of pregnancies and accounts 8% of maternal death. In developing countries, the incidence of obstructed labour is difficult to estimate because most of the reported studies are based on data from territory hospital. In India its incidence was found ranging from 2-5%30. In study over a period of five years (1385-89) revealed the incidence was 4.7% [6]. A hospital based study of from 1993-94 found the incidence in Pakistan was 4%32[7]. In Bangladesh [5, 2], study showed that the incidences were 3.59% 5.22 % & 8.46% respectively 17-14-33. In this study the incidence was found 2.65% which was statistically consistent with the above mentioned studies. This study revealed that more vulnerable age group for obstructed labour was 20-30 years in 58%. Though the teenage girls are more prone to have obstructed labour as their pelvis remains inadequate for childbirth in this study 22% of patients were in that age group. Generally obstructed labour is seen in primi gravida. A study in [6], 31 was done where the incidence of obstructed labour among primi gravida were 59%. But [8]'s study shows some different picture. The incidence is more in multiparus 58% than primiparus 42%. In this study to compare the 9Utcome between multi gravidae primi gravidae, 50% multiparous and 50% primiparous patients were selected. The socioeconomic condition, educational level and occupation of the patient had a significant relationship with their health awareness, which was reflected by their attendance to the antenatal clinic. The status of antenatal check up in the present study was very poor. 66% of the primigravidae had no ANC at all, 30% had irregular & 4% had regular antenatal checkup. 60% on muligravidae patient no antenatal checkup at all, 34% had irregular and 6% had regular antenatal checkup which was statistically consistent with the study of [2], where 66% had no antenatal checkup, 34% had irregular checkup. However in India & Pakistan, booked cases were 11.45% and 7% respectively. A study in the incidence of obstructed labour was much higher for the unbooked patients (33%) than for the booked cases (1.78%) [6]. In the present study in primigravidae 84% came from low socioeconomic class, 14% from average and 2% from, good economic class. 56% patients' husbands were daily labourer, 26% were farmer and the rest were small businessmen and service holders. The educational status of the patient was very low, illiterate 56%, primary & secondary level were 32% and 10% respectively and only 2% patients went to college. In the present study in multigravidae 90% came from low socioeconomic class, 10% from average and none from good economic class. 72% patients' husbands were daily labourer, 16% were farmer and the rest were small businessmen and service holders. The educational status of the patient was very low, illiterate 68%, primary & secondary levels were 28% and 4% respectively and only none went to college. In the study of [3, 5] 1%, 1.5% and 1.43%, patient were from high socioeconomic condition respectively. 82% of the primi gravidae patients were housewife in this study and others were maid servants, day labourer service holder (Garments worker). 92% of the mufti gravidae patients were housewife in this study and others were maid servants, day labourer & service holder (Garments worker). The study 88% was housewife which was close to 85% but in study 71% of patient was house wife [2, 3, 5]. In this study most of the patient was referred to hospital by relatives 54% in primi gravidae and 50% in multi gravidae 22% in primi gravidae and 18% in multi gravidae referred by T.B.A. 14% in primi gravidae and 18% in multi gravidae referred by Midwives, 6% in primi gravidae Doctors, 4% in primi gravidae and 6% in muiti gravidae referred by Nurse, none landing childbirth were not aware of the dangers of delay in obstructed labour and in most cases they referred the patient only when jeopardized. In only 6% cases in primi gravidae and 8% cases in multi gravidae were consulted by medical person and referred to referral hospital. 56% of the primi gravidae and 46% of multi gravidae patients came within 24

hours of labour pain, 32% of primi gravidae and 44% of multi gravidae patient got admitted themselves after neglected and uncared labour with duration of labour pain more than 24 hours. 12% of primi gravidae and 10% of multi gravidae were passed more than 48 hours. However study showed different result where 80% came after 24 hours of labour pain & most patient 84% came within 24 hours of labour pain [5].

In the present study majority of patients were admitted with considerable malhandling. Most of them were exhausted with agonizing pain & distress, pulse was rapid in 68% in primi gravidae and 64% in multi gravidae cases and temperature was raised in 62% of primi gravidae and 68% of multi gravidae case incidating infection. All the patients were anaemic, came with moderate to severe dehydration and bladder dissented in 96% in primi gravidae and 94% in multi gravidae case, haematuria in 12% in primi gravidae and 14% in multi gravidae cases. In study 88% and 99% had bladder distension on admission respectively [2, 5]. Foetal heart sound was absent in 14% in primi gravidae and 16% in multi gravidae cases, caput formation due to obstruction in 92% in primi gravidae and 80% in multi gravidae, and meconium passed due to distress in 80% in primi gravidae and 84% in multi gravidae of the cases. In 35%, 27%, cases were admitted with absent foetat heart sound respectively, had similarity with this study [2, 5]. But in series 57% and Mala's series 45.95% had absent foetal heart sound [4]. The causes of obstructed labour in the present study population were cephalopelvic disproportion was 46% in primi gravidae and 42% in multi gravidae, The rest were due to malposition and representation; among them occipitoposterior position was 46% in primi gravidae and 24% in multi gravidae, deep transverse arrest was 10% in primi gravidae and 16% in multi gravidae. Shoulder presentation was the commonest malpresentation 6% in primi gravidae and 6% in multi gravidae, face presentation was 4% in primi gravidae and 6% in muiti gravidae, breech presentation 4% in primi gravidae and 6% in multi gravidae and cervical fibroid was 2% in primi gravidae. In the study of [2], cephalopelvic disproportion was 33%, malposition 41%, and malpresentation 26%. In [5], study cephalopelvic disproportion 30%, 50% cases were due to malposition and malpresentation. In study cephalopelvic disproportion was 48%, malposition & malpresentation 49%, among them occipitoposterior position 29% and deep transverse arrest 11% [9]. In the present study it was observed that the patient had to go for the trial of home delivery first because their husband and family member did not give consent in 24% in primi gravidae and 26% in rnulti gravidae cases. Due to economic constraints 10% in primi gravidae and 6% in multi gravidae patient did not come to hospital, 8% in primi gravidae and 10% in multi gravidae patient tried to avoid operative delivery. The patients having signs of impending rupture were also managed by caesarean section. Thus in this study LSCS were done in 90% in primi gravidae and 78% in muiti gravidae cases, craniotomy in 6% in primi gravidae and 10% in muiti gravidae, repair of ruptured uterus in 2% in primi gravidae and 4% in muiti gravidae, subtotal hysterectomy 2% in primi gravidae and 4% in muiti gravidae. In study the - were LSCS 85%, Craniotorny 9%, evisceration 4% and subtotal hysterectomy 2% [5]. In study 72% needed LSCS, 11% craniotomy and 15% subtotal hysterectomy [8]. The increased rate of LSCS and decreased rate of destructive operation may be because caesarean section has become comparatively safe than destructive operations. The strategy was to preserve the uterus by repairing the uterine rent when possible. In the case of ragged and badly ruptured uterus, subtotal hysterectomy was done. The post-operative complications in this study population were post-partum haemorrhage 18% in primi gravidae and 22% in multi gravidae, pyrexia 16% in primi gravidae and 18% in multi gravidae, paralytic ileus 20% in primi gravidae and 24% in multi gravidae, would infection 36% in primi gravidae and 44% in multi gravidae, obstetric palsy 2% in primi gravidae and 2% in multi gravidae, burst abdomen 2% in muiti gravidae patient. Repeated internal examination without any aseptic measure introduce infection outside the hospital and mother then suffer from its sequelae. The rate of wound infection is also high due to low resistance of the malnutrietec patients. The rate of PPH, Pyrexia and wound infection in [8], study we 28%, 16% and 21% respectively 34. There were 4 cases of obstetric palsy who were improved gradually by passive exercise. The fetal condition at birth was grave in ail studies including us. In this study population only 20% neonates in primi gravidae and 16% in multi gravidae were healthy, 64% in primi gravidae and 56% in multi gravidae were asphyxiated and 16% in primi gravidae and 28% in multi gravidae was stillborn. In this study though the immediate neonatal survival rate was 56%, 22% of the babies died during early neonatal period. In this study population, maternal mortality rate was 8%. 2(4%) in primi gravidae and 2(4%) in multi gravidae patient, their duration of labour pain varies from 12-48 hrs. Important observation was done in this study to find out causes of death clinically, among primi gravidae first one died from septicaemic shock on 6th postoperative day and second patient was haemorrhagic shock due to PPH with in 24 hrs of operation [10]. Among multi gravidae first patient died from haemorrhagic shock due to PPH on 1st postoperative day and second one due to septicaemic shock on 2nd post operation day [10]. Maternal mortality rate in other studies were 3%, 13.79% and 7.1% [5, 8]. The perinatal mortality rates at discharge in this study were 38% in primi gravidae and 46% in multi gravidae. It was 45% and in study it was 64% of the study population, 48% in primi gravidae and 59% in multi gravidae patients suffered from different morbidities [5, 8]. Among the morbidities wound infection was most common 36% in primi gravidae and 44% in multi gravidae, other common morbidities were PPH 18% in primi gravidae and 22% in multi gravidae, and pyrexia 16% in primi gravidae and 18% in multi gravidae, and paralytic ileus 20% in primi gravidae and 24% in multi gravidae, vasico-vaginal fistula 4% in multi gravidae and 6% in multi gravidae, obstetric palsy 2% in multi gravidae and 2% in multi gravidae, burst abdormen 2% in multi gravidae. In study total maternal morbidities was 16% [8]. As the present study includes the acute morbidities, the rate is much higher than study where only chronic morbidities were considered [8]. In this study patients were not followed up after discharged from hospital. So chronic morbidities like, vaginal stenosis chronic pelvic inflammation, uterine prolapse, dyspareunia and intenstinal obstruction could not be evaluated. In this study 40% in priir.i gravidae and 32% in multi gravidae patients were healthy, maternal morbidity was 58% in primi gravidae and 64% in mufti gravidae and maternal mortality was 4% in primi gravidae and 4% in multi gravidae, perinatal outcome 62% babies in primi gravidae and 54% babies in multi gravidae were healthy and mortality was 38% in primi gravidae and 46% in multi gravidae.

6. Conclusion

Obstructed labour is a preventable complication which can be easily prevented by early diagnosis and management. Recognizing the causes of obstructed labour are important to prevent this complication. The causes of obstructed labour solely are not due to medical causas but also the social causes. The medical causes are cephalopelvic disproportion, malposition malpresentation and cervical fibroid. The social causes are poor sociosconomic status, lack of education and unable to utilize health facility. This limited study showed then the prevalence of obstructed labour in our hospital population was 2.65%, MMR was 4% in primi gravidae and 4% in multi gravidae and perinatal death was 38% in primi gravidae and 46% in multi gravidae. Maternal morbidity rate was high; WF in 4% in primi gravidae and 6% in multi gravidae and rupture uterus in 4% in primi gravidae and 8% in multi gravidae. It can provide only an idea about the situation in our country.

7. Limitation of study

Information regarding the duration of labour was not accurate in most of the cases as labour started at home and attended by untrained dai or relatives. Maternal and fetal monitoring was done only by clinical examination and by stethoscope not by any sophisticated methods like CTG, scalp blood pH and intrauterine pressure catheter. As the patients were not followed up after discharged from hospital, some chronic morbidities like vaginal stenosis, uterine prolapse, dysparunia could not be detected. Babies who survive hypoxia and intracrania haemorrhage at birth may show signs of mental retardation, developmental delay and cerebral palsy at later life could not be followed up.

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