ISSN (Print): 2663-9491 ISSN (Online): 2789-6897

Original Article

Risk Factors and Obstetric Outcome of Malpresentation at Term in Case of Multigravida

DOI: dx.doi.org

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Received: 06 APR 2022
Accepted: 19 APR 2022
Published: 20 APR 2022

Published by:
Sheikh Sayera Khatun Medical College Gopalganj, Bangladesh

ABSTRACT

Introduction: *Persistent malpresentation at term pregnancy is an obstetric emergency. Malpresentations are associated with maternal and fetal morbidity and mortality. The aim of the study was to evaluate the risk factors and obstetric outcome of malpresentation at term in cases of multigravida.* ***Methods:*** *This cross-sectional study was conducted in the department of obstetrics and Gynaecology, Shaheed Suhrawardy Medical College and Hospital, Sher-e-Bangla Nagar, Dhaka, from January 2012 to June 2012. Fifty-two multigravid women were admitted with malpresentation at term pregnancy during this study. Data was recorded on performers, including any risk factors and obstetric complications. The neonates with low APGAR scores were referred to the Neonatal Intensive Care Unit for admission and follow-up carefully.* ***Result:*** *Commonest risk factors associated with malpresentation were oligohydramnios in 28.21% of cases followed by contracted pelvis in 20.51% cases and congenital malformation of the uterus in 17.95% cases. Among 52 cases 63.46% were complete breach followed by 17.31% was shoulder presentation. The gestational age of the majority of patients on admission was found in between 37-38 weeks in about 80.77% of cases. The major maternal complication was found postpartum hemorrhage in 17.31% of cases and obstructed labor in 15.38% of cases. Operative interference was needed in 92.31% of cases. The major perinatal complication was asphyxia in 26.92% of cases and infection in 9.62% of cases.* ***Conclusion:*** *According to the data of the above circumstances indicate that early identification of high-risk multigravida with malpresentation at term should be a great concern and they should be managed with optimum attention which in turn reduces the adverse obstetric outcome during delivery.*

Keywords: *Obstetric, Malpresentation, Multigravida.*

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(The Insight 2021; 4(2): 72-80)

INTRODUCTION

Any presentation other than vertex such as breech, compound, face, brow shoulder are called malpresentations. Spontaneous rotation from malpresentation to vertex may occur during the last 4-6 weeks of gestations but the probability is low and decreases with every week of pregnancy[1]. Risk factors contributing to malpresentation are prematurity, multiparity, placenta praevia, oligohydramnios, contracted pelvis, polyhydramnios, pelvic mass, congenital malformation of fetus like anencephaly, hydrocephalus, etc [2] .There is an association with malpresentation with progressive multiparity which is likely to be related to progressive laxity of uterine musculature with each pregnancy. Fetal hypoxia occurs secondary to the pressure of the presenting part and bony pelvis on the cord occluding fetal placental circulation. If cord compression is complete then prolonged, fetal bradycardia occurs. Persistent, severe, variable decelerations and bradycardia lead to the development of hypoxia, metabolic acidosis, and eventual damage or death. Meconium. staining of the amniotic fluid may be noted at the time of membrane rupture. Gestational age and traumatic injury during delivery also affect the final neonatal outcome. Type of perinatal injuries reported in malpresentation includes cephalohaematoma, injury to brachial plexus, fracture of humerus or clavicle or other long bones, tears in the tentorium cerebellum disruption of the spinal cord, soft tissue trauma, hypoxia, and death[3] .Among the malpresentation, breech presentation is most common. The term breech trial analysis suggested that the absence of an experienced senior practitioner was also associated with an increase in the adverse obstetric outcome. In assisted breech extraction following methods are commonly employed- the Burns Marshall method, Modified Mauriceau-Smellie- Veit maneuver, Modified Prague maneuver, Forcep delivery. In complicated cases-Pinard's maneuver, Lovset's maneuver even Duhrssess's incision can be made at 2 and 10 O'clock positions on the cervix[4] .But nowadays Obstetricians do not use these techniques widely due to several complications. In India, breech delivery accounted for 19% and 12% of stillbirths and neonatal deaths respectively and birth asphyxia lead to 41% of early neonatal deaths[5]. Other malpresentations such as shoulder, face, brow, compound presentations can also complicate the normal course of labor. With the advancement of anesthesia, antibiotics, antiseptics, blood transfusion, and intravenous therapy cesarean section has become a more preferable mode of delivery. Prior to 1965, virtually all viable malpresentation fetuses were delivered vaginally, cesarean section was reserved for specific indications only. The incidence of Cesarean Section for malpresentation has been steadily increasing from approximately 30% in 1970 to 85% in 1999 [6] .With the advancement of anesthesia, antibiotics, antiseptics, blood transfusion, and intravenous therapy cesarean section has become a more preferable mode of delivery. Today most abnormal fetal presentations are managed by cesarean section. Maternal complications include those related to anesthesia, hemorrhage, laceration of cervix, vagina, or perineum resulting from a hastily performed delivery, infection following cesarean section, venous thrombosis may also occur within 2-3 days after the operation [7] .In multipara, the uterus reacts vigorously in response to obstruction and ultimately the lower segment gives way as a result of marked thinning of its wall [5]. In the absence of prompt medical

care, most notably in the developing country, malpresentation can also result in obstructed labor with its risk of tissue necrosis and subsequent fistula formation or uterine rupture, sepsis, and death [8] .So, many malpresentation at term requires cesarean section, and the operations can be difficult. Although augmentation has been used, it is generally not advised and lack of progress should usually prompt delivery by LSCS. The aim of the study was to evaluate the risk factors and obstetric outcome of malpresentation at term in cases of multigravida.

OBJECTIVE

GENERAL OBJECTIVE

To evaluate the risk factors and obstetric outcome of malpresentation at term in cases of multigravida.

SPECIFIC OBJECTIVE

- To assess the frequency of malpresentation at term in multigravida.
- To identify the risk factors causing malpresentation at term in multigravida.
- To evaluate the maternal and fetal outcome in cases of malpresentation among the study population.

METHODS

This cross-sectional descriptive study was conducted at the Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College and Hospital, Bangladesh. The study duration was six months, from January 2012 to June 2012. The study was conducted with 52 multigravida women with malpresentation at term who were admitted at the study hospital during the study duration. A convenient sampling method was used for the sample selection. Informed written consent was obtained from each of the participants, and ethical approval was obtained from the ethical review committee of the study hospital. Strict confidentiality was maintained regarding all personal information of the participants. Data was collected using a pre-structured questionnaire and compiled and analyzed using SPSS software.

INCLUSION CRITERIA

- Multigravida women with malpresentations at term
- Patients who had given consent to participate in the study.

EXCLUSION CRITERIA

- Primigravida
- Malpresentation with preterm labor
- Exclude those affected with other chronic diseases etc.

RESULT

Table 1 shows the obstetric history of the study people. Out of 52 cases, 73.08% were up to 3rd gravida, 23.07% were within 3rd to 6th gravida, and the rest of 3.85% were more than 6th gravida. Here in this table, gestational age shows that a significantly high proportion (80.77%) belong to 37-38 weeks. Rest 17.31% fell within 39-40 weeks and 1.92% fell in more than 40 weeks. Figure-1 shows the antenatal care status of the study population. In this study, 46.51% of respondents out of 100% of patients had irregular antenatal check-ups, 38.46% had no ANC and only 15.38% had regular ANC. Table 2 shows the fetal presentations of the study population on admission. In this table, we can see the distribution of the study population according to their per vaginal findings on admission. A major portion (63.46%) were complete breech, 17.31% were

shoulder, 5.77% were compound, 3.85% were the breech-footling face and cord presentation in each. Rest 1.92% were brow presentation. Table 3: Association of risk factors with malpresentations. Here 39 patients were found associated with risk factors of malpresentation. Here 28.21% had oligohydramnios, 20.51% had contracted pelvis, 17.95% had a congenital malformation of the uterus like bicornuate, unicornuate, or septate uterus, 15.38% had placenta praevia, 10.26% had polyhydramnios, and 7.69% patients had pelvic mass like ovarian cyst, etc. Table 4 shows the mode of delivery according to their incidence. This table shows the mode of delivery according to their incidence in this series. Among 52 cases 92.31% of patients were delivered by LSCS, 5.78% were delivered vaginally with assisted breech & the remaining 1.92% had a spontaneous vaginal delivery. Table 5 shows the relation of different types of malpresentation with the mode of delivery. Here this table shows the two ways of delivery conducted in 52 cases of different types of malpresentation, among which the breech presentation most frequently occurred cesarean section was done in the majority of cases (29). Rest 4 cases of complete breech were delivered vaginally. The second major group of patients underwent CS due to shoulder presentation (9). 2 cases were the breech-footling, face, and cord presentation in each and delivered by CS. 3 cases were compound presentation and 1 case was persistent brow presentation which was delivered by cesarean section. Table 6 shows the maternal complications among the study population. Among 52 cases 35 (67.32%) patients faced complications. Among them 17.31% of patients developed PPH, 15.38% developed obstructed labor, 11.54% developed APH, abdominal wound infection occurred in 9.62% patients., Cervical tear, chorioamnionitis, and respiratory tract infection were found about 3.85% cases in each. Ruptured uterus (1.92%) was quite uncommon and there was no maternal mortality in this study. Rest 32.68% of patients had no complications. Table 7 shows the cases of perinatal morbidity. Among 52 cases 32 (61.54%) neonates faced complications. Among them, 26.92% developed asphyxia, 9.62%. developed infection, 11.54% developed physiological jaundice, 7.69% were IUGR baby 3.85%% neonates suffered from birth trauma and 1.92% had congenital defect due to malpresentation and there was no perinatal mortality in this study. Rest 38.46%% of neonates had no perinatal complication.

Table-1: Obstetric history of the study people (n=52).

Characteristics		Number of Patients	Percentage (%)
Gravida	Up to 3rd	38	73.08
	3rd to 6th	12	23.07
	More than 6th	2	3.85
Gestational Weeks	37-38	42	80.77
	39-40	9	17.31
	> 40	1	1.92

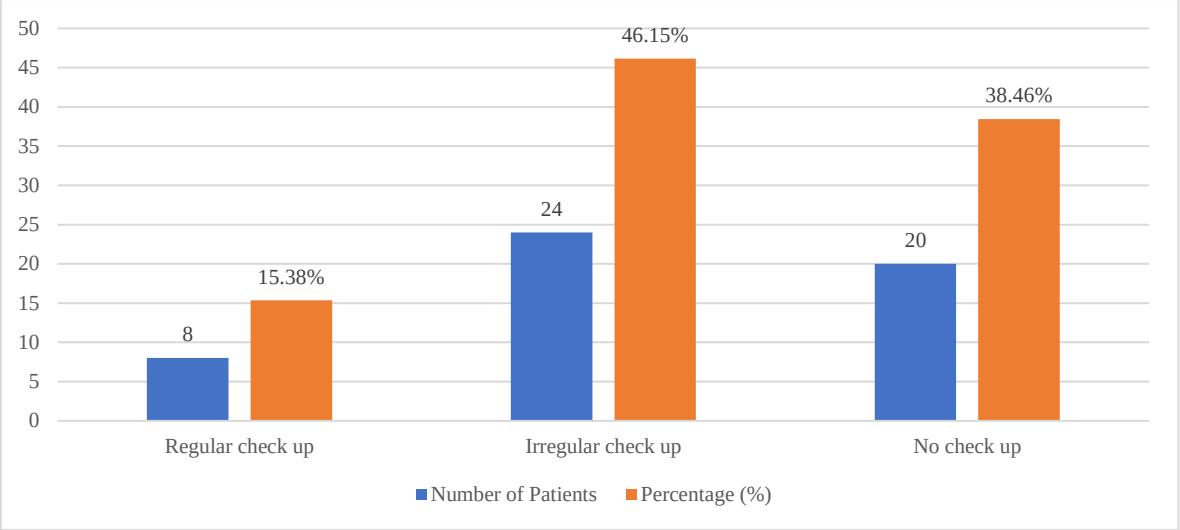

Figure-1: Antenatal Care status of study population (n=52).

Table 2: Fetal presentations of the study population on admission (n=52).

Presentation	Number of Cases	Percentage (%)
Complete breech	33	63.46
Shoulder	9	17.31
Breech-footling	2	3.85
Compound	3	5.77
Face	2	3.85
Cord	2	3.85
Brow	1	1.92
Total	**52**	**100**

Table 3: Association of risk factors with malpresentation (n=39).

Risk Factors	Number of Patients	Percentage (%)
Oligohydramnios	11	28.21
Contracted pelvis	8	20.51
Congenital Malformation of Uterus	7	17.95
Placenta praevia	6	15.38
Polyhydramnios	4	10.26
Pelvic Mass	3	7.69
Total	**39**	**100**

Table 4: Mode of delivery according to their incidence (n=52).

Mode of delivery	Number of Patients	Percentage (%)
LSCS	48	92.31
Vaginal delivery with assisted breech	3	5.78
Spontaneous Vaginal delivery	1	1.92

Total	**52**	**100**

Table 5: Relation of different type of malpresentation with mode of delivery (n=52).

Type of malpresentation	Cesarean Section	Vaginal delivery
Complete breech	29	4
Shoulder	9	0
Breech footling	2	0
Compound	3	0
Face	2	0
Cord	2	0
Brow	1	0
Total	**48**	**4**

Table 6: Maternal complications among the study population (n=52).

Maternal Complications	Number of Patients	Percentage (%)
PPH	9	17.31
Obstructed labor	8	15.38
APH	6	11.54
Cervical tear	2	3.85
Wound infection	5	9.62
Chorioamnionitis	2	3.85
Ruptured uterus	1	1.92
Respiratory tract infection	2	3.85
Total	**35**	**67.32**

Table 7: Cases of perinatal morbidity (n=52).

Descriptions	Number of Patients	Percentage (%)
Asphyxia	14	26.92
Infection	5	9.62
IUGR	4	7.69
Physiological jaundice	6	11.54
Birth trauma	2	3.85
Congenital defect	1	1.92
Total	**32**	**61.54%**

DISCUSSION

Persistent malpresentation at term pregnancy is an obstetric emergency. In such cases, complications during childbirth have long been known to increase the risk of the adverse obstetric outcome. This study was conducted to estimate the risk factors and maternal and perinatal complications associated with fetal malpresentation at term

pregnancy in 52 multigravid women admitted in the Department of Obst & Gynae, SHSMCH from January 2012 to June 2012. As it is a tertiary referral hospital many of the patients were referred cases and both booked and unbooked cases were included in this study. This series probably does not reflect the picture of the whole country because the majority of the patients who received treatment in other hospitals, were not included. Therefore, it is not possible to estimate the true incidence. In the present study among 52 cases considering gravida majority of the respondent (73.08%) were up to 3rd gravida, 23.07% were 3rd to 6th gravida, and the rest 3.85% were more than 6th gravida. These findings reflect the family planning activity in Bangladesh. The results were reported by Raabeya K was 88% up to 3rd gravida, 11% were 3rd to 6th gravida and 1% were more than 6th gravida[9] .Gestational age of the patients on admission shows that a significantly high proportion (80.77%) belong to 37-38 weeks, the second major (17.31%) fell under 39-40 weeks, and the rest 1.92% were more than 40 weeks. The majority of these cases were detected during labor when patients were referred to hospital. These features are consistent with the features of other studies [10]-[11] .In this study 63.46% of respondents presented with complete breech, 17.31% with shoulder, 5.77% with compound, and 3.85% cases with breech footling, face & cord presentation in each. and the rest 1.92% were presented with brow presentation. Breech presentation is the commonest malpresentation somewhat similar results were reported by Rawshanara B (58%)[10], Nilufar Y (57%)[11], Raabeya K (59%)[9], and other studies. Various maternal & fetal causes and other associated risk factors also influence the prevalence of malpresentation. Here in this study, 39 patients were found associated with risk factors of malpresentation 28.21% patients had oligohydramnios, 20.51% had contracted pelvis,17.95% had a congenital malformation of the uterus such as bicornuate, unicornuate, or septate uterus, 15.38% had placenta praevia, 10.26% had polyhydramnios, and 7.69 % patients had pelvic mass like ovarian cyst, etc. These features correlate with the findings of another study.[3],[6] The above risk factors mainly contribute to having malpresentation among the study population. In the course of management of the patients, LSCS was done in 92.31% of cases and vaginal delivery with the assisted breech in 5.78% of cases and spontaneous vaginal delivery in 1.92% of cases. In Rawshanara B series LSCS done in 89% of cases and vaginal delivery done in 10% cases.[10] The high rate of cesarean section was due to late presentation in hospital with maternal and fetal complications. In this study 29 cases of complete breech presentation were delivered by cesarean section and rest 4 cases of complete breech were delivered per vaginally. Second major group of patients underwent CS due to shoulder presentation (9). 2 cases were the breech-footling, face and cord presentation in each and delivered by CS. 3 cases were compound presentation and 1 case was persistent brow presentation which were delivered by cesarean section. In this study there were no maternal mortality but maternal morbidities were significantly high. Among 52 cases 35 (67.32%) patients had different types of complication such as postpartum hemorrhage (17.31%), obstructed labor (15.38%), Antepartum hemorrhage (11.54%), Cervical tear (3.85%), abdominal wound infection in (9.62%), chorioamnionitis (3.85%), ruptured uterus (1.92%) and respiratory tract infection (3.85%). Rest 32.68% of patients had no complications. In

Rawshanara's series 56% patients had miscellaneous complications.[10] In our series, high rate of wound infection was observed post-operatively due to preexisting anemia, malnutrition and lack of personal hygiene. There was no maternal mortality in this study. Currently, the maternal mortality rate associated with malpresentation is reduced due to improvement of maternal & child health care, proper antenatal check-up and timely intervention. In the present series, in about 61.54% of neonates were suffered from several complications. Among them 26.92% developed asphyxia, 9.62% developed infection, IUGR baby observed in 7.69% cases, physiological jaundice developed in 11.54% cases, birth trauma occurred in 3.85% cases, congenital defect observed in 1.92% cases and rest 38.46% neonates had no perinatal complication. Birth asphyxia is found most common perinatal complication somewhat similar results were reported by MelLeod L (23%) and Ross S (25%) cases.[12] There is no perinatal mortality observed in our study. Previously, trial of vaginal delivery in case of malpresentation at term pregnancy contribute a large in adverse perinatal outcome. Now-a days, the availability of cesarean section in complicated cases reduce the adverse perinatal outcome.

Limitations of The Study

The study was based on a small sample size. So, the study does not accurately represent the real picture of malpresentation cases at term pregnancy of the whole country. The study period was not sufficient for study.

CONCLUSION

The cases of malpresentation at term pregnancy are associated with maternal and fetal morbidity and mortality. Although nowadays health care service reached at door to door level but majority of the women were neglected in our country. Here most of the pregnant women do not under go any antenatal check up. Majority of the cases admitted into hospital are presented with the complications of malpresentation such as cord prolapse, hand prolapse, obstructed labor and ruptured uterus. To get rid of these complications due to malpresentation at term people should be aware about health education, proper nutrition, family planning, antenatal check up, literacy and removal of superstition. In our study breech presentation is found most common in about 63.46% cases. Here major associated risk factors with malpresentation were found oligohydramnios 28.21% and contracted pelvis 20.51%. About 38.46% patients had no antenatal check up and only 15.38% patients were under regular antenatal check up. Among them 56.25% patients received ANC from government hospital and 34.38% patients received ANC from NGO. In about 92.31% cases were managed by LSCS. About 67.32% patients developed maternal complication and about 61.54% neonates developed perinatal complication in this study. This study will help to reproduce sufficient evidence to fully evaluate the risk factors and obstetric outcome of malpresentation at term pregnancy in case of multigravida.

RECOMMENDATION

The data generated from this study will be helpful in respect to evaluate the risk factors and obstetric outcome of malpresentation at term in case of multigravid women in our country. Due to some limitations, we could not conduct it in a wide range, so multi centre and a long durational study will be beneficial regarding more

information. If each and every patient can be evaluated with the help of cardiotocographic examination, ultrasonographic examination, fetal anomaly scanning, proper records of previous obstetric history, blood grouping, result will be more satisfactory. If all pregnant women under go routine antenatal check up then early identification of the risk factors will be possible. This will help to ensure instant referral for specialized obstetrical care which in turn reduces the adverse obstetric outcome during delivery.

REFERENCES

1. *Weisman Al. An antepartum study of fetal polarity and rotation. Am J Obstet Gynecol 1944; 48:550-552.*
2. *Keith ED, Dewhurst's text book of obstetrics and Gynaecology. 6th edition. London: black well science, 1999.*
3. *Chamberlain G steers P. Unusual Presentations, Positions and multiple pregnancy. BMJ 1999; 318: 1192-1194.*
4. *Tunde-Byan MO et al:Breech vaginal delivery at or near tem. semin perinatol 2003; 27:34.*
5. *Dutta DC. Textbook of obstetrics, 5th edition, Calcutta (India): new current book agency (P) LTD, 2001, P:5.*
6. *Daftary SN, Patki AS. Cesarean section in present day practice. In: Krishna UR, Tank DK, Daftary SW, eds. pregnancy at risk –current concepts. New Delhi: FOGSI publication, Jaypee Publishers, 1996:450.*
7. *Arora R, Oomaguichi A.A study of maternal morbidity in cesarean section. J obstet Gynaecol India 1991; 41:192.*
8. *Liskin Ls. Matenal morbidity in developing countries: A review and comments. Inf. J Obstetrics and Gynaecology 1992; 37:77-87.*
9. *Raabeya K. Pregnancy outcome in fetal malpresentation (dissertation),BCPS,Dhaka,2008.*
10. *Rawshanara B. Pregnancy outcome in fetal malpresentation(dissertation),BCPS,Dhaka,2003.*
11. *Nilufar Y. Pregnancy outcome in fetal malpresentation and position in Rajshahi Medical College Hospital (Dissertation),Dhaka,2007.*
12. *Su M, MclLeod L, Ross S et al. Factors associated with adverse perinatal outcome in the Term Breech trial. Am J Obstet Gynecol 2003;189:740-45.*