

COMPLICATIONS OF LABOR IN CASES REFERRED TO ABBASI SHAHEED HOSPITAL AND QATAR HOSPITAL, KARACHI..

YASMIN MUMTAZ¹, EMADUDDIN MUHAMMAD², MAWRA MAQSOOD³,
UROOS MADEEHA⁴, BINTULL HUDA⁵

ABSTRACT

Objectives:

The purpose of this study was to find out the frequency of complicated labor in cases which are referred to Abbasi Shaheed Hospital and Qatar Hospital, and to identify the risk factors and the fetal outcome.

Material and Method:

It was a descriptive cross sectional study, conducted in gynea and obstetric wards of Abbasi Shaheed Hospital and Qatar Hospital. Non-probability convenient sample of 100 referred cases was considered. Questionnaire were filled by interviewing patients and from their records too.

Results:

Out of 100 referred cases, complication of labor occurred in 77% cases. Major complications were obstructed labor 24 (31.2%) cases, post partum hemorrhage (PPH) 16 (20.8%) cases, premature rupture of membrane (PROM) 8 (10.4%) cases and purpeural sepsis 6 (7.8%) cases. Age of the patient, bleeding during pregnancy, previous C.section, any instrumentation, and complication during previous parturition are found to be the risk factors associated with complicated labor (p-value <0.05). 88% of the fetus survived in all the referred cases and 87% in complicated cases.

Conclusion:

A considerable proportion of referred cases had complicated labor. Most common complication were obstructed labor, PPH. Maternal age, bleeding during pregnancy, any instrumentation, history of Cesarean section and any complication during previous parturition were found to be the important predisposing factors that must be considered during pregnancy.

Key words:

Complicated labor, C. section, risk factors of labor, fetal outcome, PPH (Postpartum Hemorrhage). PROM. Obstructed labor.

INTRODUCTION

Labor is a physiological process during which the products of conception (i.e, the fetus, membranes, umbilical cord, and placenta) are expelled outside of the uterus.¹ In this process many complications can arise at different stages. There are many pre-disposing factors behind each complication and can cause morbidity and mortality of mother as well as fetus. Post-partum hemorrhage, Obstructed labor, premature rupture of membranes, Dystocia, Vesicovaginal fistula, and are the most occurring complications. These are present in developed as well as in developing countries, but the incidence is much higher in developing countries. Each year world wide, close to 600,000 women die due to complications of pregnancy and childbirth.^{2, 3} The maternal mortality ratio (MMR) in Pakistan is 320 per 100,000 live births according to the recent estimates.⁴ An estimated 10 million women annually who survive their pregnancies experience adverse outcome.⁵

¹ Department of Community Medicine,
Dow University of Health Sciences, Karachi
^{2,3,4,5} 4th Year MBBS Students,
Karachi Medical and Dental College

Most maternal deaths are related to obstetric complications including post- partum hemorrhage, infection, and eclampsia and prolong labor.⁶⁻⁷

Other forms of maternal morbidity include anaemia, infertility, chronic infection, depression and incontinence—all of which may result in domestic problems including physical and psychological abuse, household dissolution and social exclusion.⁸⁻¹⁰

Complicated labor can also endanger the life of new born. Sometimes the complications may be so severe that it can endanger the life of mother and fetus both, thus by knowing the proportion of different complications of labor and the risk factors, necessary measures can be taken to deal with the specific complication in referred cases and morbidity and mortality rate of mother and fetus can be reduced to as low as possible. High risk individuals can be identified on the basis of presence of associated risk factors. The aim of the study was to find the proportion of complicated labor in referred cases and to identify the risk factor and to determine the fetal outcome.

MATERIAL AND METHODOLOGY

It was Descriptive Cross sectional study conducted at Obstetric and gynecology wards of Abbasi Shaheed Hospital and Qatar Hospital, Karachi. Non probability convenient sample of 100 pregnant women referred to those wards during May 2008 was taken. Those who were not given the consent were excluded.

In order to collect the data we visited the obstetrics and gynecology wards in ASH and Qatar hospital. The purpose and objectives of the study was explained to the participants and they were assured that their confidentiality will be maintained. Informed Consent was taken from every participant. Participants interviewed and data collected from their available records. A questionnaire comprising of both open and close ended questions was designed for this purpose. variables include name, age, address, socio economic status, occupation,

number of children, family history, past medical and obstetrical history, questions were asked about complications during labor, multiple gestation, previous cesarean section, episiotomy, history of smoking, profuse vaginal discharge bleeding during pregnancy, prolonged labor, induction of labor, any instrumentation trauma, manually removal of placenta, presentation and lie of the fetus and whether the fetus survived or not. Pre-testing was done on referred patients in Abbasi Shaheed Hospital and necessary corrections were made in the questionnaire.

Statistical package for social sciences (SPSS) version 11 was used for data entry and analysis. Simple frequencies, percentage and cross tabulations were done and p value at .05 levels is calculated.

RESULTS

Demographic characteristics are shown in Table-1. Cases referred by small hospital 58%, by private clinic 31% and by dais 11%. Complications of labor occurred in 77% of the referred cases, major complications were obstructed labor 24 (31.2%), PPH 16 (20.8%), premature rupture of membrane 8 (10.4%), purpural sepsis 6 (7.8%), dystocia 2 (2.6%) and other complications 21 (27.3%) (Fig. – 1)

Age of the patient Bleeding during pregnancy Cesarean section in previous parturition Instrumentation and any complication during previous parturition are the important risk factors. p values were (.006) (.019) (.019) (.026) (.004) respectively. (Table no. 2). Female of age group 30 – 39 were found to be at high risk of developing complication of labor than other age group.

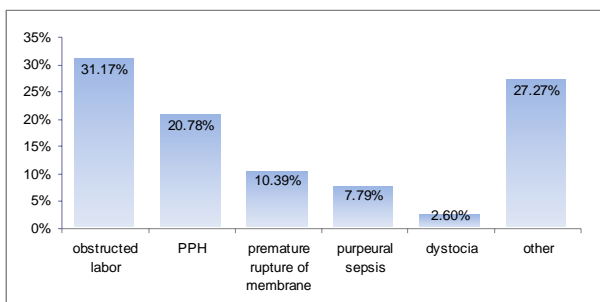
Other factors like parity, multiple gestation, smoking during pregnancy, any medical disorder during pregnancy, trauma, history of manual removal of placenta and induced labor have not shown significant association with complications occurring during labor.

Fetus Survived in 88% of all the referred cases while in 77 complicated cases 67 (87%) of fetus survived .

**TABLE NO.1
DEMOGRAPHIC PROFILE (N=100)**

Variables	Percentage	
Age	15-19 yrs	7%
	20-29 yrs	56%
	30-39 yrs	37%
Parity	Primipara	31%
	Multipara	42%
	Grand multipara	26%
Occupation	Housewife	96%
	Teacher	1%
	Working woman	1%
Socio-economic status	Fair	33.30%
	Poor	67.60%
Family history	Not significant	69%
	Hypertension	16%
	Diabetes mellitus	10%
	Other	5%
Past medical history	Not significant	95%
	Hypertension	4%
	Jaundice	1%
Variables	percentage	

**FIG.1
PROPORTION OF DIFFERENT COMPLICATIONS OF LABOR IN REFERRED CASES (N=77)**



**TABLE NO.2
PROPORTION OF COMPLICATIONS OF LABOR IN ASSOCIATION WITH DIFFERENT RISK FACTORS**

Factors	Complication during labor			Total	p-value
	Yes	No			
Age	15-19 yrs	2 (28.6%)	5 (71.4%)	7	0.006
	20-29 yrs	44 (78.6%)	12 (21.4%)	56	
	30-39 yrs	31 (83.8%)	6 (16.2%)	37	
	Total	77 (77%)	23 (23%)	100	
Cesarean section	Yes	54(84.4%)	10(15.6%)	64	0.019
	No	23(63.9%)	13(36.1%)	36	
Instrumentation	Yes	14(100%)	0-	14	0.019
	No	63(73.3%)	23(26.7%)	86	
Bleeding during pregnancy	Yes	13(100%)	0-	13	0.026
	No	64(73.6%)	23(26.4%)	87	
Complication in previous	Yes	26(89.7%)	3(10.3%)	29	0.044
	No				

DISCUSSION

Most of the cases that are referred from small hospitals, private clinic and by midwives developed complication of labor probably because of the poor techniques carried out at these places to deliver the baby and because of insufficient facilities to overcome the problems arising during labor and lack of skilled personnel.

The result of this study showed that major complications of labor were Obstructed labor (31.17%), PPH (20.8%), Premature rupture of membrane (10.4%), Purpural sepsis (7.8%), Dystocia (2.6%). These finding are similar with the study carried out in Department of Gynae Ayub Teaching Complex Abbotabad, there major complication that occurred during labor were post-partum hemorrhage 7.6%, Obstructed Labor 5.6%, PROM 5.05%.¹¹

The result of this study also showed that Age of the mother is significantly associated with complicated labor (p value .006). Female of age group 30 – 39 years (83.8%) are found to be at high risk of developing complication of labor, this finding is supported by a research study which concluded that Age of the mother is an important risk factor for the development of a complicated labor, pregnan-

cies at both extremes of life (< 20 and > 35) are associated with a higher incidence of obstetric complications and congenital malformations.¹²

The result further showed that C section, was also important risk factor 84.4% of patients developed complication during labor who have previous history of C section. This is supported by research study which concluded that more cesarean births a woman had the greater her risk of developing potentially serious pregnancy complications. c-section at first birth increased the second pregnancy risk of pre-eclampsia by 2.9-fold, small for gestational age by 1.5-fold, placenta accreta by 1.5-fold, placental abruption by 2.0-fold, and uterine rupture by 37.4-fold.¹³

The study further showed that Instrumentation, bleeding during pregnancy, Complication in previous parturition are the important risk factor for development of complicated labor. These findings are consistent with a study which concluded that other risk factors associated with the delivery complication were diabetes induced labor, increased maternal age, vacuum- and forceps-assisted deliveries.¹⁴

In a study about the pattern of fetal deaths in a university hospital of Sindh the identified risk factors for fetal deaths were antepartum hemorrhage (30%), mismanaged labor (26%), and prolonged rupture of membranes (26%).¹⁵

Hence maternal age, bleeding during pregnancy, any instrumentation, history of previous Cesarean section and any complication during previous parturition are found to be the important predisposing factors.

The World Bank estimates that basic intervention as antenatal care, attendance at delivery by skilled health personnel and accessible emergency treatment for women and new born could avert all most three quarter of maternal death.

Educated Mother are also more likely to seek proper health care for themselves; according to the 2007 Millennium Development Goals Report, "84%

of women who have completed secondary or higher education are attended by skilled personnel during child birth, more than twice the rate of mothers with no formal education".¹⁶

Encouragingly, there are signs that efforts to address anemia by fortifying staple foods like flour are beginning to accelerate at the national level in a number of developing countries.¹⁷

Despite the appreciable progress, much more needs to be done including testing and counseling and quality sexual and reproductive health services in addition to medicine.¹⁸

Clean delivery practices are clearly important in preventing infection, but maternal infections also need to be identified and treated during pregnancy. Infections in newborn require rapid identification and treatment as soon as possible following childbirth.¹⁹

It should come as no surprise that the countries with highest rates of neonatal mortality have among the lowest rates of skilled attendants at birth and institutional deliveries.¹⁹

The most common factors for poor fetal outcome in developing countries are pregnancy and labor associated complications. (Ante partum hemorrhage, pregnancy induced hypertension, congenital anomalies, prolonged rupture of membranes, mismanagement of labor and medical problems like diabetes mellitus, cardiac disease).²⁰

CONCLUSION

A considerable proportion of referred cases had complicated labor. Most common complication were Obstructed labor and PPH. Maternal age, bleeding during pregnancy, any instrumentation, history of previous Cesarean section and any complication during previous parturition were found to be the important predisposing factors that must be considered during pregnancy.

REFERENCES

1. American College of Obstetricians and Gynecologists. Dystocia and augmentation of labor (clinical management guidelines). ACOG Practice Bulletin

- # 49, American College of Obstetricians and Gynecologists, Washington, DC 2003
2. United Nation Children Fund 1998, The state of world children, Oxford University press pg 12
 3. `WHO, united nations children's fund , united nations population fund and the world bank, Maternal mortality in 2005, Estimates developed by WHO, UNICEF,UNFPA and the world bank, WHO Geneva,2007,pp 3-8,35
 4. United Nation Children Fund 2007. The state of world children. Oxford University press pg 148
 5. Nanda Geeta, Kimerly Switlick and Elizabeth Lule, Accelerating progress towards achieving the MDG to Improve Maternal health: A collection of promising approaches , World Bank, Washington DC, April2005,p.4
 6. Ronsmans Carine, and Wendy J. Graham,'Maternal Mortality: Who, when where and why' The Lancet, Vol. 388, no 9542, 30 September 2006, p. 1193; Li, X.F., et all.,
 7. World Health Organization, World health Report 2005: Make every mother and child count, WHO, Geneva, 2005, pp. 10, 62.
 8. World Health Organization, Adolescent Pregnancy: Unmet needs and undone deeds – A review of the literature and programmes, WHO, Geneva. 2007, pp. 19-20.
 9. United Nations Children's Fund, Progress for Children: A report card on maternal mortality, Number 7, UNICEF, New York, September 2008. p. 6:
 10. Gunasekera, Prasanna, Junko Sazaki and Godifrey Walker, 'Pelvic Organ Prolapse: Don't forget developing countries', The Lancet, Vol. 369, no. 9575, 26 May 2007, pp. 1789-1790. (20)
 11. Meharunnissa Khaskheli, Shahla Baloch, Imdad A. Khush , Shaheen Sharf Shah; Pattern of fetal deaths in a university hospital of sindh. J Ayub Med Coll Abbottabad, june 2007;vol 19 No.2:pp 32-4
 12. Shamshad Begum; Age and parity related problems affecting outcome of labour in grand multiparas. Pakistan J. Med. Res. Vol. 42 No.4, 2003: 179-84
 13. Nelson WE, Behrman RE, Vaughan VC. Textbook of pediatrics, 12th ed. London and Philadelphia, Saunders Co., 1992.
 14. Anne Kjersti Daltveit, Mette Christophersen Tollånes, Hege Pihlstrøm, Lorentz M. Irgens; Cesarean Delivery and Subsequent Pregnancies Obstet. Gynecol., Jun 2008; 111: 1327 – 1334
 15. Kramer, M; Induced Labor Tied to Maternal Risk. The Lancet, Oct. 21, 2006; vol 368: pp 1444-1448.
 16. United Nations, The Millennium Development Goals Report 2007, UN, New York, 2007, p.17.
 17. Center for LDisease Control and Prevention, 'Trends in Wheat-Flour Fortification with Folic Acid and iron- worldwide, 2004 and 2007',Morbidity and Mortality Weekly Report, vol. 57, no. 1. 11 January 2008, pp. 8-10. (15)
 18. Ronsmans, Carine, and Wendy J. Graham, 'Maternal Mortality: Who, when, where and why',The Lancet, Vol.368, no. 9542, 30 September 2006, pp 1194-1195. (18)
 19. Lawn, Joy E., Simon Cousens and Jelka Zupan, '4 million Neonatal Deaths: When? Where? Why?', The Lancet, Vol. 365, no. 9462, 5 March 2005, pp. 894 – 896;
 20. Khandait DW, Ambadekar NN, Zodpey SP, Vasudeo ND. Maternal age as a risk factor for stillbirth. Indian J Public Health 2000; vol 44 (1): 28-30.