

ORIGINAL ARTICLE

The Frequency of Maternal Complications after Home DeliveredMARYAM PHULPOTO¹, AISHA KANWAL², ROOHI NIGAR³, SUHAIL AHMED BIJARANI⁴, IFAT BALOCH⁵, SAMIYA ROSHAN⁶¹Assistant Professor, Department of Gynecology and Obstetrics, Bilawal Medical College LUMHS, Kotri Hospital Jamshoro²Shah Faisal Hospital DHO Korangi³Assistant Professor, Department of Gynecology and Obstetrics, Bilawal Medical College LUMHS, Kotri Hospital Jamshoro⁴Assistant Professor, Department of Community Medicine and Public Health Sciences, LUMHS Jamshoro⁵Assistant Professor, Department of Gynecology and Obstetrics, Bilawal Medical College LUMHS Jamshoro⁶Women Medical Officer, Sindh Government MCH center, Bagh e Korangi, District KorangiCorresponding author: Maryam Phulpoto, Email: maryamphulpoto@yahoo.com**ABSTRACT****Objective:** To determine the frequency of maternal complications among women delivered at home by Traditional Birth Attended (TBA) Dais presenting at the emergency department of tertiary care hospital.**Study Design:** Descriptive case series**Study setting:** The study was conducted at the Emergency Department of Gynecology Unit –III of Liaquat University Hospital, Hyderabad.**Study Duration:** Six months from 1st May 2018 to 30th November 2018.**Methods and Material:** A sample of 140 was obtained, participants were selected by using the Non-probability sampling technique and all the women from 20 to 45 years of age either primipara or multiparous who delivered at home by traditional birth attendant (TBA) Dais and presented within 12 hours up to 10 days after delivery at emergency department of Gynecology Unit –III of Liaquat University Hospital, Hyderabad included, after getting informed and written consent from their family members, a questionnaire was used to collect information from the women or her relatives. Data was collected for the complications like post-partum hemorrhage, a retained product of conceptus, puerperal sepsis perineal tears injuries. We have used SPSS version 20.0 software for both data entering and analysis. Frequencies and standard deviations were calculated and the chi-square test was used to analyse categorical variables. P values less than 0.05 were considered statistically significant.**Result:** The total number of women who delivered at home by (TBA's)/ Dai's and developed maternal complications presented in the emergency department within 12 hours up to 10 days during the study period was 140. The average age of the patients was SD 29.27±5.21 years. Regarding parity, 58(41.43%) were primigravida and 82(58.57%) multigravida. The postpartum hemorrhage was the commonest maternal complication observed in 62.14% (87/140) cases, retained placental products 27.14% (38/140), purporeal sepsis 7.86% (11/140) and perineal tear injuries 17.14% (24/140). Retained placental product, perianal tear injury and PPH were not statistically significant among different ethnicity while the rate of puerperal sepsis was statistically significant among different ethnicity groups. The frequency of PPH and perianal tear injury was significantly high among those women who had primigravida while the rate of Retained placental products and Puerperal sepsis was high in multigravida but it was not statistically significant. **Conclusion:** This study concluded that home deliveries conducted by untrained birth attendants were associated with increased maternal morbidity and a high risk of maternal mortality. The postpartum hemorrhage was the most common maternal complication observed in women after home delivery by a Traditional Birth Attended (TBA) Dais.**Keywords:** Home deliveries, Traditional birth attendant, maternal complication,**INTRODUCTION**

Maternal Mortality is a significant indicator to assess the quality of health care in both developed and undeveloped countries.¹ The death of the woman during her pregnancy is not only grief and pain but has extensive consequences for the index child, other children, her husband, and the entire society.² No matter the length or site of the pregnancy, maternal death is defined by the World Health Organization as "the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes."³

Despite the enormous global progress in maternal health, an estimated 300,000 died in 2015 due to pregnancy-related conditions.⁴ "Traditional birth attendants or Dais" are Unskilled health workers and have been approached for home birth and other maternal health-related issues for a long but have been suggested as a risk factor for adverse pregnancy and neonatal outcome in-home deliveries because of lack of training and skills, whereas Skilled birth attendants can prevent up to 75% or more of maternal deaths occurs during labour, delivery and in the early postpartum period.⁵ Approximately 830 women die due to pregnancy-related problems every day.⁶ Maternal mortality rate of developing countries is 287 per 100000 live births which is very high as compared to developed countries i.e. 16 per 100,000 livebirth.⁷ Pakistan nearly 65% to 72% of home deliveries are conducted by traditional birth attendants/Dai's because of unawareness, non-affordability, low socioeconomic status, illiteracy or little time to shift women to hospital, people seek health care from them.⁸⁻⁹ Due to this patients commonly with complications

mostly postpartum hemorrhage (50.6%), retained placental products (28.4%) perineal tear injuries (18.4%), purporeal sepsis (10.7%). Increasing mortality has been seen in patients with the former two conditions: postpartum haemorrhage and retained placental products.¹⁰ The common maternal complications of home deliveries reported are postpartum and retained placental, these life-threatening complications can be prevented by providing training to Dai's, maternal & neonatal health care center (MNCH), many studies reveal that planned home deliveries of low-risk women by trained certified skilled birth attendants have less risk of perinatal mortality and maternal morbidity even than those who delivered at health facilities.¹¹

MATERIAL AND METHODS

This study was a Descriptive case series and was conducted at the Emergency Department of Gynecology Unit-III of Liaquat University Hospital, Hyderabad, Sindh. During the period of six months from 1st May 2018 to 30th May 2018. A sample of 140 women was selected by using the Non-probability sampling technique, all the women from 20 to 45 years of age either primipara or multiparous who were delivered at home by a traditional birth attendant (TBA) Dais and presented within 12 hours up to 10 days after delivery at the emergency department of Gynecology Unit –III of Liaquat University Hospital, Hyderabad. After getting informed and written consent from their family members, a questionnaire was used to collect information from the women or her relatives. Data was collected for the complications like post-partum hemorrhage, a retained product of conceptus, puerperal sepsis perineal tears injuries. We have used SPSS

version 20.0 software for both data entering and analysis. Frequencies and standard deviations were calculated and categorical variables were analyzed using the chi-square test. A P-value of ≤ 0.05 was taken as statistically significant.

RESULTS

There were 140 women delivered at home by (TBAs) / Dia's and presented in the emergency department of Gye/Obs Unit –IV of Liaquat University of Medical Health Sciences, Hyderabad, within 12 hours up to 10 days were included in this study.

The average age of the patients was 29.27±5.21 years. Regarding parity, 58(41.43%) were Primigravida and 82(58.57%) were multigravidas and as well Postpartum hemorrhage and perianal tear injury were significantly high among those women who had primigravida while the rate of retained placental products and Puerperal sepsis was high in multigravida but not statistically significant between primigravida and multigravida women as shown in table 1.

Table 1: Frequency of Maternal Complications in Women Delivered at Home by Untrained Birth Attendant (TBA) by parity (n=140)

Maternal Complications	Primigravida n=58	Multigravida n=82	P-Value
Postpartum hemorrhage	43(74.1%)	44(53.7%)	0.014
Retained placental products	11(19%)	27(32.9%)	0.067
Puerperal sepsis	2(3.4%)	9(11%)	0.103

Most of the women were illiterate 36.43% (51/140), low educated 29.29% (41/140) secondary 30.00% (42/140) higher 4.29% (5/140) as well socioeconomic status was also not good the women as the majority of them were poor (68/140) 48.51%, middle (66/140) 47.14% and upper class (6/140) 4.29%. The frequency of maternal complications was presented in Figure 1.

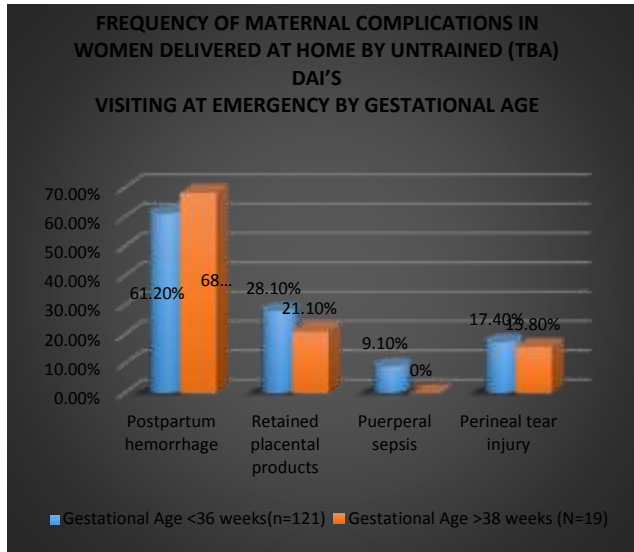


Figure 1

Postpartum hemorrhage was the commonest that was observed in 62.14% (87/140) cases, retained placental products 27.14% (38/140), puerperal sepsis 7.86% (11/140) and perineal tear injuries 17.14% (24/140). Stratification analysis was performed and observed that the frequency of maternal complications was not significant among different maternal age groups as shown in Table 2. The rate of PPH, retained placental product and perianal tear injury was statistically not significant among different ethnicity while the rate of puerperal sepsis was statistically significant among different ethnicity.

Maternal Outcome	Age Groups (Years)				P-Value
	≤25 n=42	26 to 30 n=55	31 to 35 n=26	36 to 40 n=17	
Postpartum hemorrhage	21 (50%)	34 (61.8%)	19 (73.1%)	13 (76.5%)	0.142
Retained placental products	13 (31%)	16 (29.1%)	7 (26.9%)	2 (11.8%)	0.485
Puerperal sepsis	2 (4.8%)	5 (9.1%)	1 (3.8%)	3 (17.6%)	0.321
Perineal tear injury	5 (11.9%)	11 (20%)	5 (19.2%)	3 (17.6%)	0.751

Table-2. Frequency of maternal complications in women delivered at home by Untrained Birth Attendant Visiting Emergency by Maternal

DISCUSSION

Homes are the main place of delivery and nearly about 65 percent of total births take place at home in Pakistan in which a large number of those delivered by Dais are associated with maternal complications,¹¹ whereas studies conducted in developed countries concluded that home births are safe for normal, low-risk women conducted by skilled birth attendants and access to health care facilities to refer women in case of any complication. Our study found that home births delivered by Traditional Birth Attendants Dais were associated with increased maternal morbidity. According to a study conducted in a rural part of Pakistan's District Hyderabad, 67% of births take place at home, and 38% of them result in obstetric problems¹² In our study out of 140 women 37% were illiterate and 33% and 30% were with primary and secondary education respectively which shows that lack of education is an important determinant for home delivery with TBAs. Other studies also revealed that educational status impact on health care seeking from hospitals¹³⁻¹⁴. Higher-educated women prefer hospitals for childbirth, while illiteracy and unawareness contribute to women preferring delivery at home. In our study, out of 140 women, 53% were from poor socioeconomic backgrounds while 47% were from the middle class.

A study of rural Burkina Faso conducted by Some TD et.al documented that lack of money was a hurdle for preferring health facilities for delivery.¹⁵ Postpartum haemorrhage 62.14% and retained placenta 27.14% were the commonest complications of home delivery by untrained dais in our study. The same complications have been reported by studies conducted in Nepal and India. Similar third-stage complications have also been reported by other studies from Nepal.¹⁶ In our study perineal tears were found in 17.14% of women which is similar to the data from the studies of planned home births internationally.¹⁷ Puerperal sepsis has been responsible for maternal mortality throughout human history but fortunately the introduction of aseptic techniques and antibiotics from 18th to 20th century has brought out a significant reduction in the maternal deaths.¹⁸ In a study done at Liaquat University Hospital, Hyderabad, Sindh from June 2006 to May 2008, home delivery was found the major risk factor for puerperal sepsis as out of 230 patients reported with puerperal sepsis 54.78% of patients were delivered at home,¹⁹ while in our study puerperal sepsis was observed in 7.86% patients out of 206 patients stating the least frequent complication of home deliveries. The strength of the current study is that the study has measured the burden of adverse outcomes/complications of home deliveries. This preliminary study should pave the way for more extensive studies in this area. Work in this area will also help to provide feedback to the health care authorities, so as to draw their attention for better planning of the reproductive health of women. There are some important limitations of our study too. Such as, the

sample size was small and there was no control group of women who had had home deliveries without any complications.

CONCLUSION

This study concluded that home deliveries conducted by untrained birth attendants were associated with increased maternal morbidity and a high risk of maternal mortality. The postpartum hemorrhage was the most common maternal complication observed in women after home delivery by a Traditional Birth Attended (TBA) Dais.

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