Original Article

An Insight into the Distribution of Complications of Pregnancy in District Muzaffarabad, Azad Jammu & Kashmir

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Abstract

Objective: To retrospectively analyze earlier health care seeking for pregnancy related complications in obstetric cases admitted for childbirth at a tertiary care level facility of district Muzaffarabad, Azad Jammu & Kashmir (AJK).

Study Design: Retrospectively analyzed cross-section.

Place and Duration: The study was conducted from January 2011 to July 2011 at Abbas Institute of Medical Sciences (AIMS) hospital situated in district Muzaffarabad of AJK.

Methodology: All pregnant women admitted for childbirth at Abbas Institute of Medical Sciences (AIMS) hospital situated in district Muzaffarabad of AJK. Case histories of obstetric cases admitted in Obstetric & Gynecological ward were retrieved from the data base of this tertiary care level facility. After initial scrutiny, records of pregnant women with complications of pregnancy, were selected for further analysis of their earlier health care seeking. From this retrospectively analyzed cross-section, records of 235 eligible pregnant women with pregnancy, related complications were selected. Complications included anaemia (86%), bleeding including APH & PPH (9%), hypertension and other medical conditions (5%). For the purpose of this study, cases that had been diagnosed and recorded as such in the database of the AIMS hospital were taken as bleeding, antepartum haemorrhage (APH) and postpartum haemorrhage (PPH). Whereas, pregnant women with hemoglobin (Hb) level of less than 10 gm/dl were taken as anaemic in our study. Close-ended questionnaire utilized for the analysis of earlier health care seeking for pregnancy related complications included variables such as urban/rural place of residence, distance (in km) travelled by the pregnant women to reach AIMS hospital, antenatal care (ANC) received/not received, presence/absence of first level care facility (FLCF) between residence and the AIMS hos-

pital, referred/not referred obstetric cases, hemoglobin level checked at AIMS hospital and availability/ non-availability of previous record of hemoglobin testing or treatment for anaemic pregnant women. Data was analyzed using SPSS version 16.

Results: More than 70% of the pregnant women who delivered at the AIMS hospital belonged to the surrounding villages of the district Muzaffarabad while remaining women were from the urban population. Only 18% of the pregnant women in this study had received some kind of ANC during their current pregnancy. Eighty seven percent of pregnant women in our study were found to be anaemic. Ninety nine percent of the anaemic women did not have any previous record of hemoglobin testing or treatment of their anaemia.

Conclusion: Majority of women with pregnancy related complications did not seek antenatal care, had not utilized the nearby primary healthcare facilities available in the district Muzaffarabad. Intervention needs to be planned and implemented to enhance the primary health care utilization in AJK.

Key words*: Pregnancy related complications, first level care facility, anaemia, Muzaffarabad.*

Introduction

Primary health care represents the central point of the health care system and policies generated for this level may influence the entire system and beyond. Strengthening Maternal, Newborn & Child Health (MNCH) at the primary health-care level should be our priority to reach Millennium Development Goals (MDGs). But three decades after the Alma-Ata Declaration, state of primary care remains poor in Pakistan .[1]

According to the Pakistan Demographic and Health Survey (PDHS) 2006-07, availability and quality of Emergency Obstetric Care (EmOC) is a matter of great concern in Pakistan. Nearly three-fourths of maternal deaths occur during childbirth and the postpartum period in our country.[2] Timely and appropriate referral and transfer to basic or comprehensive EmOC facilities for treatment is essential for saving lives of women. Key to the effectiveness of the referral system is the early identification of complication and prompt initiation of treatment.[1]

According to the AJK Interim Constitution Act of 1974, AJK comprises of liberated states and is under the administration of the Azad Government of the State of Jammu and Kashmir. Azad Kashmir is divided into ten administrative districts with Muzaffarabad as the capital of the State.[3] Health system of AJK comprises of primary (preventive & curative), secondary and tertiary health care levels. Maternal mortality ratio in AJK is 201 per 100,000 live births.[4]

In line with the National trends, indicators of health sector have not shown much proficiency in AJK. Mountainous topography with a rural to urban ratio of 88:12 in AJK[3] as compared to 64:36 in Pakistan[4,5] are the causes of inadequate health coverage in AJK. More than 50% of the women in AJK are of the reproductive age group with sex ratio of 96 males per 100 females.[6]

Our research was conducted with the objective of retrospectively analyzing earlier health care seeking for pregnancy related complications in obstetric cases admitted for childbirth at a tertiary care level facility of district Muzaffarabad, AJK. Findings of this study are expected to help in improving the districts' as well as the overall health care system for mothers in AJK in order to reduce morbidities and mortalities due to preventable causes.

Methodology

All pregnant women admitted for childbirth at AIMS hospital situated in district Muzaffarabad of AJK from January 2011 to July 2011 were included in the study. Written approval was taken from the administration of the hospital before initiation of this study. Case histories of pregnant women admitted in Obstetric & Gynecological ward were retrieved from the data base of this tertiary care level facility. Strict confidentiality was maintained while retrieving and analyzing the hospital data base. After initial scrutiny, pregnant women with complications of pregnancy were selected for further analysis of their earlier health care seeking. For the purpose of this study, cases that had been diagnosed and recorded as such in the hospital database were taken as bleeding, antepartum haemorrhage (APH) and postpartum haemorrhage (PPH). Whereas, pregnant women, with hemoglobin level of less than 10 gm/dl, were taken as anaemic in our study. Close-ended questionnaire was utilized for the analysis of earlier health care seeking for pregnancy related complications. Questionnaire was modified after analyzing the data on 75 obstetric cases in SPSS version 16 when surplus variables were deleted. Selected variables included urban/rural place of residence, distance (in km) travelled by the pregnant women to reach AIMS hospital, ANC received/not received, presence/absence of FLCF between residence and the AIMS hospital, referred/not referred obstetric cases, haemoglobin (Hb in gm/dl) level checked at AIMS hospital and availability/ non-availability of previous record of haemoglobin testing or treatment for anaemic pregnant women. Descriptive statistical analysis was carried out in order to analyze earlier health care seeking amongst pregnant women for their pregnancy related complications.

Results

Two hundred and thirty five eligible pregnant women with pregnancy related complications were selected (table I). Complications included anaemia (86%), bleeding including APH & PPH (9%), hypertension and other medical conditions (5%).

Table I. Complications of pregnancy

Complication	Frequency	Percentage
Anaemia	204	86.0
Diagnosed APH case	11	5.0
Diagnosed PPH case	9	4.0
Hypertension	9	4.0
Diabetes	1	0.5
Bleeding without diagnosis	1	0.5
Total	**235**	**100.0**

Ages of pregnant women in our research were categorized in age groups of five. Largest proportion of pregnant women (42%) belonged to the age group ranging from 28 to the 32 years. Sixty percent of the mothers had to travel a distance of more than 18 kilometers to reach the AIMS hospital situated in Muzaffarabad city. More than 70% of the pregnant women who delivered at the hospital belonged to the surrounding villages of the district Muzaffarabad while remaining were urban residents.

Only 18% of the pregnant women in this study had received some kind of the ANC during their current pregnancy. While eighty two percent of the women delivered in this hospital did not have any record of the ANC received throughout the nine month's duration of their pregnancy (table II). Fifty two percent of the mothers could have utilized the facilities of the Basic Health Unit (BHU) and thirty two percent of the Rural Health Center (RHC). Only 17% of the pregnant women were actually referred to the hospital for further evaluation and management while remaining had no referral record.

Table II. Record of ANC received

ANC	Frequency (n)	Percent (%)
Received	43	18.0
Not received	192	82.0
Total	235	100.0

Record of Hb testing was categorized in groups of two. Eighty seven percent of pregnant women in our study were found to be anaemic; whereas record of haemoglobin testing was not available for the remaining. Our study also included three mothers with ≤ 3 gm/dl of haemoglobin (table III). Ninety nine percent of the anaemic pregnant women in our study did not have any previous record of haemoglobin testing or treatment received for their anaemia (table IV).

Table III. Anaemia (Hb in gm/dl)

Hb	n	Percentage
3-4 gm/dl	5	2.0
5-6 gm/dl	21	9.0
7-8 gm/dl	88	37.4
9-10 gm/dl	88	37.4
<3 gm/dl	3	1.2
non-available record	30	13.0
Total	235	100.0

Table IV. Previous Hb testing

Previous Hb	n	Percentage
Available	2	1.0
Not available	233	99.0
Total	235	100.0

Discussion

Our study has found out that majority of pregnant women had to travel long distances for childbirth at a tertiary care level facility located in Muzaffarabad city. Additionally majority of pregnant women in our research belonged to surrounding villages of the capital district. Average distance to a reproductive health facility in rural areas of AJK is almost four times the distance in urban areas; making access to services for rural women without transportation or funds extremely difficult.[7]

Supported by data at the national level[8], we found out in our study that seeking antenatal care is very low amongst pregnant women. Moreover, we found out in our study that majority of pregnant women did not utilize the FLCF represented by the BHU and the RHC. No more than 20% of people in Pakistan consult a government first-level care facility, and this picture has been unchanged for the last 10 years.[8]

In most rural areas of Pakistan, antenatal coverage is closer to 10%. In Baluchistan province, antenatal care from the government facilitates is 14.4% in which it is mainly rural.[9] Like other provinces of the country; availability of female staff is not optimal in AJK. Number of LHVs (Lady Health Visitors) and nurses is not sufficient for the populations` health needs of the AJK.[7] Although cultural norms in Pakistan underscore the need for reproductive health service providers to be females, yet there is severe scarcity of female healthcare providers.[10-12] This gender imbalance among healthcare providers results from inadequately sanctioned posts for female workers, inability to recruit female health providers on sanctioned posts and high (4%) attrition rate among female health workers. Availability of adequate female health providers at all levels of healthcare is imperative.[13] Problem of shortage of trained health staff is exacerbated by lack of balance between community/outreach, and facility-based delivery strategies.[14]

Findings of our study revealed a high prevalence of anaemia in pregnant women at the time of childbirth. According to the National Nutrition Survey of 2011, prevalence of clini-

cal anaemia is the highest in AJK which is 36%.[15] Majority of the pregnant women in our research did not have any previous record of haemoglobin testing or treatment received for their anaemia. Poverty is a key hindrance to women's wellbeing especially during pregnancy resulting in malnutrition and anaemia.[16] Evidence suggests that anaemic women are more vulnerable to even moderate amounts of blood loss. Access to timely and competent obstetric care determines whether or not a woman will die from bleeding during or after childbirth.[17]

This study also included three mothers with ≤ 3 gm/dl of haemoglobin. Small proportion of pregnant women in our research had received Red Cell Concentrate (RCC) transfusion with none of them receiving any Fresh Frozen Plasma (FFP) or platelet unit transfusion. Reason behind this is the fact that blood donor motivation, recruitment and retention programs are almost non-existent in AJK like other parts of the country.[18]

There is evidence to suggest that participatory health education interventions coupled with community-based primary health care in rural regions can improve maternal health.[19,20] Strong focus is required on the production and deployment of a critical mass of Community Midwives (CMWs) and Lady health workers (LHWs) linked to the health system, and supported by a strong partnership and active community participation. Systematic review of new evidence on potentially useful interventions and delivery strategies identifies 37 key promotional, preventive, and treatment interventions and strategies for delivery in primary health care. Some are especially suitable for delivery through community support groups and health workers, whereas others can only be delivered by linking community-based strategies with functional first-level referral facilities. Inclusion of evidence-based interventions in MNCH programmes in primary health care could prevent 20–21% of newborn deaths, and 29–40% of all deaths in children aged less than five years.[21]

Conclusion

Majority of women with pregnancy related complications did not seek antenatal care, had not utilized the primary healthcare setup in district Muzaffarabad which is also the capital of the AJK. Intervention needs to be planned and implemented to enhance the primary health care utilization in AJK. Reorganization of the health care facilities at primary care level is deemed necessary to provide antenatal care to the expectant mothers. Judicious utilization of health care facilities requires health awareness, education and optimal utilization of health care facilities at all level in AJK.

References

1. Bhutta ZA, Ali S, Cousens S, Ali TM, Haider BA, Rizvi A, Okong P, Bhutta SZ. Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? Lancet. 2008; 372:972-989.
2. Midhet F, Jafarey S, Ahsan A, Sheraz A. Adult and Maternal Mortality in Pakistan Demographic and Health Survey 2006-07.National Institute of Population Studies and macro International Inc.2008 June:180.
3. AJK Planning and Development Department. Azad Kashmir at a Glance. 2009. Muzaffarabad.
4. AJK Planning and Development Department, Federal Bureau of Statistics, UNICEF Pakistan. Multiple Indicator Cluster Survey (MICS).2007-08 August. Muzaffarabad.
5. Rural population (% of total population) in Pakistan. World Bank Indicators - Pakistan– Density & Urbanization 2012. http://mdgs.un.org/unsd/mdg; http://www.who.int/mdg/goals/en/index.html [accessed on March 14, 2013].
6. National Institute of Population Studies, Pakistan. AJK Demographic Health Survey.2010.Islamabad.
7. How far can I go? Social Mobility of Community Midwives in Azad Kashmir. Research Report by Research & Advocacy Fund.2011, Pakistan.
8. National Institute of Population Studies and macro International. Pakistan Demographic and Health Survey 2006-07. 2008 June. Islamabad.
9. A Ghaffar, S Pongpanich, R S Chapman, A Panza, S Mureed, N Ghaffar. Provision and Utilization of Routine Antenatal Care in Rural Balochistan Province, Pakistan: a Survey of Knowledge, Attitudes, and Practices of Pregnant Women. Journal of Applied Medical Sciences. 2012; 1 (1): 93-116.
10. Pakistan Integrated Household Survey 2001–2002. Federal Bureau of Statistics, Government of Pakistan, Islamabad.
11. Health Management Information System. National feedback report, 1995 and 1996. Islamabad: Government of Pakistan, Ministry of Health, 1996.
12. Annual report of Director General Health, Biostatistics Section, Primary Health Care Cell. Ministry of Health, Government of Pakistan, Islamabad, Pakistan; 2000–2001.
13. Rizvi N, Nishtar S. Pakistan's health policy: Appropriateness and relevance to women's health needs. Health Policy.2008; 88:269–281.
14. Bhutta ZA, Ali S, Cousens S, Ali TM, Haider BA, Rizvi A, Okong P, Bhutta SZ. Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? Lancet. 2008; 372:972-989.
15. National Nutrition Survey Pakistan 2011.Aga Khan University Pakistan, Pakistan Medical Research Council (PMRC), Nutrition Wing, Cabinet Division, Government of Pakistan Supported by UNICEF Pakistan.

16. Aftab S, Ara J, Kazi S, Deeba F. Effects of Poverty on Pregnant Women Pakistan. Journal of Medical Research.2012; 51 (1).
17. Ronsmans C, Graham W. Maternal mortality: who, when, where, and why? Lancet. 2006; 368:1189-200.
18. Gilani I, Kayani ZA, Atique M. Knowledge, Attitude and Practices (KAP) regarding Blood Donation prevalent in Medical and Paramedical Personnel. JCPSP. 2007; 17 (8): 473-476.
19. Bhutta ZA.Community-based interventions for improving perinatal and neonatal health outcomes in developing countries: a review of the evidence. Pediatrics. 2005; 115: 519 - 617.
20. Rosato M. Community participation: lessons for maternal, newborn, and child health. Lancet. 2008; 372: 962 - 971.
21. Bhutta ZA, Ali S, Cousens S, Ali TM, Haider BA, Rizvi A, Okong P, Bhutta SZ. Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? Lancet. 2008; 372:972-989.