Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20204354

Study on postnatal care in a tertiary care hospital in eastern India and the reality

Bharati Das*

Department of Paediatrics, Postpartum Programme, SCB Medical College and Hospital, Cuttack, Odisha, India

Received: 30 May 2020 Accepted: 17 September 2020

*Correspondence: Dr. Bharati Das,

E-mail: bharathidas15@gmail.com

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ABSTRACT

Background: Post-natal period remains the most important time in which maximum maternal and neonatal mortality occurs. Many studies had been done on postnatal care in India also in abroad before. However, most of them were basically community-based surveys in rural areas or urban slums. The objective of the current study was to assess knowledge and practice of postnatal care services and its status in mothers in urban area.

Methods: It is a prospective, hospital-based study done from February 2019 to July 2019. Data was collected by structured questionnaire method from the mothers who were coming for routine immunization for their babies at 6 weeks.

Results: Total number of mothers were 214, 52.34% were delivered in medical college and DHQH and 47.66% at private sectors. Health related issues were present in 36 (16.6%) of mothers and 33 (15.4%) of babies. Only 2.8% of mothers received post-natal check-up. IFA and calcium supplementation were taken (128) 60% of mothers as opposed to advised in 151 (70.56%) of cases of varying durations.

Conclusions: Post-natal care was unacceptably low despite various government programmes, well socioeconomic status, education of the mother and presence of health-related issues in the mother or the baby. Which was mainly due to lack of proper counselling for postnatal care. Strengthening the postnatal care services by sensitization of the staffs with uniform policy and mother centred counselling remains the need of the hour.

Keywords: Postnatal care, IFA, Calcium, Tertiary care centre

INTRODUCTION

The postnatal period is defined as the time immediately after the birth of the baby and up to 6 weeks (42 days) after birth, which is critical for both the new-born and the mother. Earlier international studies have shown that 50% of maternal death and 40% of neonatal deaths occur within 24 hours after birth. For this reason World Health Organization (WHO) recommends the timings for postnatal care within 24 hours, 2nd/3rd day, 7th day after delivery. Around the world, it is recognized that postnatal care is crucial in maintaining and promoting the health of the woman and the new born baby. It also gives opportunity for health personnel to promote exclusive breastfeeding, personal hygiene, appropriate feeding

practices, family planning counselling and other services. Postnatal care also includes provision of postnatal calcium and iron supplementation to the mother and immunization of newborns too.^{1,2} Maternal health services includes antenatal services, institutional delivery and postnatal services.

Proper utilization of antenatal and postnatal care services play important role in reducing maternal mortality ratio and infant mortality rate.¹ Globally there is decline in maternal mortality ratio (MMR) by 44% over the last 25 years, from 385 maternal death per 100,000 live births in 1990 to an estimate 216 maternal death per 100,000 live births in 2015. Approximately 99% of global maternal deaths in 2015 took place in developing regions, with sub-

Saharan Africa alone accounting for roughly 66% followed by Southern Asia. More than 1/3rd of worlds maternal death occur in 2015 in Nigeria 58,000 (19%) and India 45,000 (15%) respectively.³

Postpartum anemia is the major cause of maternal morbidity and mortality world-wide. It can lead to postnatal depression, delayed wound healing, Urinary tract infection (UTI), increased susceptibility to ductitis and mastitis, fatigue, exhaustion, insufficient and reduced milk quality, low immunity. The prevalence of postpartum anemia in developing countries ranges from 50-80%. More than 70% women in postpartum period were found to be anemic in a survey from a north Indian village.⁴ The prevalence of anemia increases after delivery is a well-established fact too.⁵

The long term disability and mortality from postpartum problem can occur due to incontinence, fistula, pelvic inflammatory disease, genital prolapse, hypertension, hemorrhoids, pituitary failure, anemia and infertility. Despite the WHO recommendation seven out of 10 women do not receive any postpartum care as per demographic health survey. Mothers only seek postnatal care in the event of complication after birth. In developing countries low utilization of postnatal care has been related to lack of knowledge about its importance, lower level of education, lack of access to health services, lack of counselling of postnatal care in institutional deliveries and women's tendency to give priority to health need of their child than their own. Socio cultural beliefs in the community also play important role. §

Since the launch of Janani Suraksha Yojana (JSY) conditional cash transfer scheme in India, various studies documented proportional rise in institutional delivery. 9-11 Though we have succeeded some extent in antenatal care and delivery services, many studies done on postnatal care (PNC) services specially community based surveys in rural India or urban slums shows poor coverage of postnatal care. So, the objective of the current study was to assess knowledge and practice of postnatal care services and its status in urban area in a tertiary care centre.

METHODS

It is a prospective, hospital-based study done from February 2019 to July 2019 in Well Baby Clinic Unit of Post-partum Programme Department of SCB Medical College and Hospital, Cuttack, Odisha.

Methodology

Data were collected by using structured questionnaire method from the mothers who were coming for routine immunization of their babies at 6 weeks of age. The demographic variables collected were age, education status, parity, type of delivery, place of delivery, condition of the mother and the baby, iron and calcium supplementation status, breast feeding practice, postnatal

check-up of the mother and the baby for data analysis. Details were verified and confirmed by different reports and the discharge summary brought by the mother. Being a tertiary care centre, we have floating population. The immunization for urban slums and different wards under Cuttack municipality were covered by local Anganwadi Centre. Usually we have educated mass and well socioeconomic class people coming for immunization of their children. As all of our cases were delivered in hospital, the routine discharge protocol followed for the normal deliveries were after 3 days and for caesarean deliveries after 7 days or depending upon the case. The routine postnatal follow up visit asked for used to be is 6 weeks. So, instead of taking the number of postnatal visits following delivery we took the postnatal visit after discharge as advised which is at 6 weeks or the days has been asked for depending upon the case. Data received was entered and analyzed by simple frequencies and percentages.

RESULTS

Demographic information

Table 1: Demographic profile of the mothers (n=214).

Variables	Frequency (%)				
Age group in years	Trequency (70)				
<20	24 (11.24)				
21-25	81 (37.85)				
26-30	86 (40.18)				
31-35	19 (8.87)				
>36	4 (1.86)				
Education					
Under primary	4 (1.86)				
Under matric	24 (11.2)				
Matriculation	81 (37.85)				
12th class	40 (18.69)				
Graduate	55 (25.72)				
Postgraduate	10 (4.67)				
Parity					
G1	137 (64.01)				
G2	55 (25.70)				
G3	15 (7.02)				
G4	7 (3.27)				
Occupation					
Housewife	206 (96.26)				
Working	8 (3.74)				
Mode of delivery					
Normal	112 (52.33)				
Lower segment caesarean section (LSCS)	102 (47.67)				

Total number of mothers were 214. Age group were 19-38 years. Among which 109 (50.93%) had delivery at our medical college, 3 had at District head quarter hospital, 102 (47.66%) had at private nursing homes. 8 were working mothers having other professional qualifications.

Table 2: Health related issues of mother and babies.

Mothers	Number	Babies	Number
Hypothyroid- 15 (prepreg 4+ pregnant 11)	15	LBW	16
GDM	4	VLBW	2
Pre- pregnancy DM	2	ELBW	1
PIH	10	IUGR	4
Eclampsia	1	NNHB	8
Convulsive disorder	1	Down syndrome	1
SLE	2	Cong anomalies	1
Sickle-β thalassemia	1	Erb's palsy	1
		HIE	1
		Meconium aspiration syndrome	1
		RDS	5
		ROP	2
		Sepsis	2

Table 3: Duration of IFA and calcium advised versus taken.

Duration of IFA and calcium	Advised (n=151), n (%)	Taken/to be taken (n=128), n (%)
7 days		1
10 days	1	1
15 days		1
6 weeks	7	2
1 month	48 (31.78%)	48 (37.5%)
1-2 month		3
2 months	4	15 (11.71%)
2-3 month		1
IFA-1 month and calcium-3 months	7 (3.2%)	
3 months	75 (49.66%)	24 (19.6%)
3-6 months		1
4 months	1	2
6 months	7 (3.2%)	20 (15.62)
6 months to 1		1
year		
1 year		2
Not knowing		5
Only calcium 3 months	1	1

Among which Masters of computer applications (MCA) 2, Pharmacy 1, Bachelor of law (LLB) 1, Bachelor of education (B.Ed) 1, Master of philosophy (M.Phil) 2,

Bachelors of technology (B.Tech) 1. The demographic details of the mothers have been depicted in (table 1).

Status of mother and child

Total 36 (16.82%) of mothers and 33 (15.4%) of the babies were having different health related issues. Details of which has been described in (table 2).

Utilization of postnatal care

128 (59.81%) mothers were taking iron folic acid and calcium supplementation, 86 (40.19%) not on supplementation. In the discharge summary postnatal check-up and continuation of IFA and Calcium supplementation was written in 151 (70.56%) cases and not written in 63 (29.44%) cases. The details regarding the duration of IFA and calcium taken/ to be taken against the advice given has been mentioned in (table 3).

Among 214 mothers only 3 mothers (1.4%) received postnatal check-up, another 3 (1.4%) mother knew and planned for it later. 206 (97.2%) of the mothers didn't have postnatal check-up. Details of which is in (table 4).

DISCUSSION

IFA and calcium supplementation

As per current guideline the duration for both IFA and calcium supplementation is 180 days for antenatal period. It should be started by 14 weeks of gestational age and it to be continued in the postnatal period for the duration of 180 days.¹² This has been clearly mentioned in the Maternal and child protection card (MCP card) meant for the beneficiaries and is to be explained by the service care provider usually at public sector. It has been found many didn't attend the Anganwadi centre in urban area. Do visit only during postnatal period after delivery to get the MCP Card to know the subsequent immunization schedule of the baby as birth dose vaccination has become mandatory at the place of delivery. IFA and calcium is freely supplied at all government health care facilities including AWC, DHQH and Medical Colleges. However, many families prefer to purchase having doubt in quality issues.

Our studies showed the intake of IFA and calcium supplementation was 99.98% during antenatal period and postnatal period was 59.81% at the opposite to postnatal advice written for it was 70.56% in the discharge summary. However, the duration prescribed ranges from 10 days to 6 months and the duration taken/to be taken ranges from 7 days to 1 year with a great mismatch. The postnatal increase in intake for 6 months up to 20 (15.62%) at the opposite to 7 (3.2%) advised was due to counselling and supply by the local Anganwadi worker during the time they meet them to get the MCP card. This service is often underestimated by urban educated and well socioeconomic mass. There was significant disparity regarding the duration of IFA and calcium supplementation

prescribed in the discharge summary both by the public sector and private sector.

During antenatal period other than 1 mother, others were taking IFA and calcium supplementation.

The reason for taking IFA and calcium supplementation during antenatal period were: as advised by the doctor to take without understanding its use was 62 (29.10%), thinking as it is some sort of vitamin taking for baby's growth 140 (65.72%) and iron is required for blood and calcium to make baby's bone strong 11 (5.16%).

So, the main focus and understanding by the mother is for the babies without giving any importance to herself during antenatal period.

The reason for taking IFA and calcium supplementation during postnatal period were: as it was advised in the discharge summary 65 (50.78%), without understanding the advice given in the discharge summary just like that decided to take for 1-3 months till the baby becomes bit strong. 50 (39.06%) and as it was provided by the Anganwadi Centre 13 (10.16%).

The reasons for not taking during postnatal period were: as it was not told or advised by any health care personnel 46 (53.5%), not knowing to be taken 24 (27%), just like that not taking knowingly was 12 (14%), gastritis 2 and piles 1 (3.4%), however all these mothers were taking during antenatal period and sickle β eta thalassemia 1 case (1.1%) was taking only calcium.

During counselling came to know certain facts from the husbands that despite it has been provided to the mother and even the availability of the stock in the home, many mothers don't take it due to callousness. However, after counselling regarding the blood loss during delivery and explaining as mother and child are still one unit as they survive through breastfeeding. All the mothers replied the necessity of IFA and calcium supplementation for 6 months without knowing the existing guideline. Even many mothers felt guilt for their unknowing negligence which might have cause harm to the baby. Also has been convinced to take care of themselves too. The advice given in the MCP card for antenatal and postnatal IFA and calcium intake were also shown to them.

Study done in other tertiary care hospital in Rajasthan showed that IFA supplementation was 75.5% during antenatal period and 11.03% during postpartum period. Reasons for not taken was due to their own wish was 64.82%, 8.96% were not informed or effectively counselled by the health personnel and 26.20% had poor compliance during antenatal period.⁵

Post-natal check up

Mothers

The Government of India has recommended that all mothers and new-borns should receive 3 postnatal check-up with-in 42 days of delivery as follows: first with-in 48 hours, second between 3-7 days and third with-in 42 days of delivery. In our study postnatal check-up was only 2.8%, which is very low. Postnatal check-up was done by mother only when they found stitch abscess, wound dehiscence etc. Reasons for not having so were not aware of postnatal check-up was 116 (55%), didn't find necessity to go 68 (32%), 24 (11.2%) not gone due to negligence. Study done by other tertiary care centre in Delhi showed despite 100% counselling regarding postnatal care and contraception in the antenatal period in the same institute, only 9.3% returned for postnatal care.

Table 4: Postnatal check-up done / to be done by the mothers.

Parity	Education	Place of delivery	Type of delivery	Health issue mother	Health issue baby	IFA and calcium advised	IFA and calcium taken	PNC done	Reason
G1	9 th class	Private	LSCS	normal	normal	No	No	Yes	Stich issue
G1	graduate	Private	LSCS	normal	normal	1 month	1 month	Yes	routine
G1	graduate	Medical college	LSCS	normal	normal	1 month IFA 3 months calcium	1 month	Yes	Stich issue
			Will Go						
G1	graduate	private	LSCS	normal	normal	No	1 month	Will go	Routine
G2	PG	private	LSCS	normal	normal	No	1 month	Will go	Routine
G3	12th class	Medical college	NVD	hypothyroid	normal	3mo	3 months will take	Will go	Routine

There was significant difference awareness and actual utilization of postnatal care facilities. ¹⁴ The low utilization of PNC is also found in other Indian study. ¹⁵ Some other study showed only 21% of the mothers visits doctor for more due to their postnatal problem than due to routine check-up. The reasons for not having PNC showed 66% of mothers didn't found need to go, 14% had lack of time and 20% were unaware of postnatal health services. ¹⁶ This was also low comparing to neighboring countries and other developed countries which is 70%. ^{17,18} Poor uptake of postnatal care in South Asia particularly in India has also been showed in different study. ¹⁹

Previous study reported the need for PNC utilization and awareness were significantly related to the education of the mother. 16,20,21,22,23 Some studies also showed increase in post-natal visits occurs significantly with increase in socioeconomic status. 16,23,24,25 In our study as most of them were educated as 86.93% were having higher secondary education and above it and not from low socioeconomic status. So poor counselling for postnatal care both for the mother and babies remained the main cause than education and socioeconomic status. Lack of accessibility to health services remain one of the factors for low utilization of postnatal care in one of the study.8 Lack of accessibility to health care services was not the issue in our study. Other study done in urban area also showed that in spite of mass availability and physical accessibility of health facility, the utilization of postnatal services was still poor.25

Postnatal care of the babies

Out of 214 babies 181 were normal and 33 babies were having different health related issues. Mothers were completely ignorant about the Intensive care unit (ICU) issues of the babies. Families used to think the burden was over once they were discharged after long period of hospital stay. Other than the breastfeeding and warmth practices others like sepsis prevention precaution were poorly followed. Many normal babies and ICU babies brought were found studded with different ritual threads, tabijs were put at the upper limbs, lower limbs, waist, and neck. At time fragments of broomsticks and hairs were also tied around. Mothers too were having big nails. Though routine Retinopathy of prematurity (ROP) screening and follow up services has been provided in Sick new born care unit (SNCU) in the Obstetrics and gynecology department, parents of such babies were not aware of it even the babies were admitted there before. However, follow up care protocol were mentioned with dates in the discharge summary meant for the baby.

Majority of the mothers were having knowledge regarding breastfeeding. Regarding knowledge about immunization. As birth dose immunization has become compulsory other than SNCU babies other babies had received birth dose vaccines at their respective places of delivery both in public and private sectors. We have integration of JSY incentives with the birth dose immunization of the newborns by the state government due to very low coverage of

0 dose hepatitis B vaccine earlier. So, the families of the SNCU babies were keener to receive JSY incentives than the postnatal care of mother and the baby. They often force to give immunization to the baby even in unsuitable conditions. It was very difficult to convince them with repeated counselling. Other postnatal care study which included the new-born care services also had highlighted the vital need to improve the knowledge and awareness for new-born care and also advocated for removing the myths and wrong practices which are rampant in our community.²⁶

The important things noticed were mothers were not aware of the necessity of requirement and existence of routine postnatal care services. Though the educated mothers sound more receptive. Irrespective of the level of educational qualification none of them either had gone through the discharge summary or had any interest in it. However, they used to take medications whatever was given by the family without understanding the purpose and duration to be taken.

Irrespective of educational status, the necessity of checkup of blood pressure and modification of antihypertensive medications, antithyroid drugs and diabetes management after discharge and follow up for it was not known to them. Even it was mentioned in the discharge summary. However, they followed it after it has been pointed out during counselling.

Study limitations

Mothers not having and also reluctant to get the necessary documents of their discharge summary or other related documents were not included in the study which might have had changed the figure we were having. Being it a well baby clinic mothers were counselled for the present postpartum status and referred to the Obstetrics and gynecology OPD details of which were not included in the study.

CONCLUSION

Despite of well socioeconomic status and education of the mothers, even with presence of health-related issues in the mother or the baby and accessibility of various government programmes, postnatal care was unacceptably low. Which was mainly due to lack of proper counselling for postnatal care. Lack of uniform policy followed in the advice for IFA and calcium supplementation were noted too.

Recommendation

Strengthening of the postnatal care services with uniform policy than casual routine formalities for it is the need of the hour to keep pace with antenatal care and institutional delivery. More sensitization regarding the postnatal care by counselling is not only required for the family or the public but also for the staffs including doctors, nurses and paramedical staffs and other health care personnel who are

directly or indirectly involved in antenatal and delivery care services. Mothers too should be kept as an integral part of it with active participation than being side-lined.

ACKNOWLEDGEMENTS

I would like to acknowledge the mothers and the family for their cooperation and patience even they were coming for routine immunization of the babies which helped to uncover the ground reality and better planning our health service system.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Das B. Study on postnatal care in a tertiary care hospital in eastern India and the reality. Int J Community Med Public Health 2020;7:3917-23.