International Journal of Medical and Health Research
ISSN: 2454-9142
Received: 23-10-2018; Accepted: 25-11-2018
www.medicalsciencejournal.com
Volume 4; Issue 12; December 2018; Page No. 155-157

Assessment of different parameters for discharge against medical advice at neonatal intensive care unit

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Abstract
The studies in paediatric populations indicated that the problem of discharge against medical advice (DAMA) is more prevalent in neonates. This has serious consequences considering limited physiological reserve of the neonates. These studies also indicated that reasons for DAMA vary according to settings, culture, and other factors.
So, the present study was planned to know the knowledge about spectrum of neonatal factors and proper management of common neonatal problems will lead to better outcome and improved quality of life among survivors.
The 50 neonates were enrolled From Upgraded Department of Pediatrics, Patna Medical College & Hospital, Patna from Dec 2017 to Oct 2018 in the present study. This was a retrospective descriptive study from NICU of a teaching hospital were included. After obtaining approval from the Institutional Ethics Committee (IEC), necessary permissions were taken from the hospital authorities.
The outcome of the hospital stay was 42 cases were discharged, 3 were referred to other hospital. There are 4 cases of DAMA and 1 cases of death in the patients admitted to NICU.
Hence from the present study it can be conclude that Neonatal jaundice, preterm and low birth weight babies had significantly high mortality even with standard intensive care. Maternal and neonatal health care policies should be further strengthened for prevention of complications related to birth. The present study showed the various aspects of the patients admitted to the NICU and the discharge against the medical advice cases.

Keywords: discharge against medical advice, neonatal intensive care unit, NICU, children's, DAMA

Introduction
The development of any country is reflected by its growth indicators. WHO states that 5.9 million children died under 5 years of age in 2015 (16000deaths per day) [1]. Every year four million babies die in the neonatal period (1st 4 weeks of life), with India contributing to one-fourth of the total mortality burden. The highest contribution to infant and U5MR is neonatal mortality. 1 75% of the neonatal deaths occur in the first week of life and at least 50% occur in the first day of life [2]. WHO world leaders had gathered together in 2000 to address the issue as millennium development goal.
Against medical advice (AMA), sometimes known as discharge against medical advice (DAMA), is a term used in health care institutions when a patient leaves a hospital against the advice of their doctor [1, 2]. While leaving before a medically specified endpoint may not promote the patient's health above their other values, there is widespread ethical and legal consensus that competent patients (or their authorized surrogates) are entitled to decline recommended treatment [3].
The available data suggests that in general, patients discharged AMA have an increased risk of hospital readmission, and potentially death [4]. This data however, describes groups of patients discharged AMA, and therefore should not necessarily be applied to an individual patient wishing to leave AMA, and who may have different clinical circumstances and risks.
Although common hospital practice for an AMA discharge involves the patient being asked to sign a form stating that he or she is aware that they are leaving the facility AMA, the hospital is generally not legally required to use it [5]. Rather, the legal and ethical requirement is that the authorized health care professional has an informed consent discussion with the patient regarding his/her choice to leave the hospital before it has been recommended. This discussion which includes disclosure of the risks, benefits, and alternatives to hospitalization, as well as the patient's understanding, should be documented in the patient's chart. Many physicians incorrectly believe that insurance denies payment for hospitalization for patients leaving AMA, leaving patients financially responsible [6]. This "pervasive 'medical urban legend'" may lead to ethical problems, as it "scare[s] patients with misleading information" about their exposure to costs, leading to a "breakdown in the patient–doctor relationship" and an infringement of patient autonomy [6].
Some authors have begun to question the wisdom of the practice of designating a discharge as AMA, as it doesn't follow professional standards, lacks evidence of its utility to improve patient care, and may harm patients by reducing their likelihood of following up. Finally, there is widespread ethical consensus that even when patients decline recommended treatment, health care professionals still have a duty to care for and support patients [7].
The limited research in this area has led to a stagnation in effective interventions designed to alleviate AMA discharges.

Multiple retrospective studies examining AMA discharges over the last 4 decades have attempted to identify risk factors in order to develop interventions to reduce the likelihood of AMA discharges in the future. The majority of studies have identified patient risk factors for AMA discharges that included low socioeconomic status, history of drug or alcohol abuse, and male gender. No studies have yet attempted to identify physician factors that increase the risk of an AMA discharge. More research is needed to understand this practice and intervene effectively [8].

Neonatal Mortality statistics serve as sensitive indicators of the availability, utilization, and effectiveness of maternal child health service in the community. The incidence of Neonatal Mortality rate is variable from place to place and is also different from hospital to hospital and home born babies. Data derived from hospital record do not truly represent Neonatal Mortality rate and its various causes in the community at large but has the advantage of being more reliable in term of causes of death and reflect the quality of service available [9].

The studies in paediatric populations indicated that the problem is more prevalent in neonates. This has serious consequences considering limited physiological reserve of the neonates. These studies also indicated that reasons for DAMA vary according to settings, culture, and other factors.

So, the present study was planned to know the knowledge about spectrum of neonatal factors and proper management of common neonatal problems will lead to better outcome and improved quality of life among survivors.

Methodology

The 50 neonates were enrolled From Upgraded Department of Pediatrics, Patna Medical College & Hospital, Patna Dec 2017 to Oct 2018 in the present study. This was a retrospective descriptive study from NICU of a teaching hospital were included. After obtaining approval from the Institutional Ethics Committee (IEC), necessary permissions were taken from the hospital authorities. The study hospital was visited on a pre-informed date for data collection. Medical records of all neonates in the above mentioned period were reviewed and data extraction from the records was done using a pre-tested proforma.

The following was the inclusion and exclusion criteria for the present study.

Inclusion criteria

- The babies born in all over the district and nearby areas and those who were referred to the hospital
- All the admitted babies to NICU, were included into study.

Exclusion criteria

- Those parents who were not giving consent.

Result & Discussion

The data from the 50 neonates admitted to the NICU were collected and presented as below. The Birth place of 32 cases was in hospital and 18 were outside the hospital. There were 35 males and 15 females in the present study. The study found that the 41 cases were delivered at term where as 9 were before term. The Birth Weight observed are 22 of Normal, 20 of Low Birth Weight, 5 of Very Low Birth Weight and 3 cases are Extremely Low Birth Weight. The duration of hospital stays was normally 1 to 3 days in 35 cases.

The outcome of the hospital stay was 42 cases were discharged, 3 were referred to other hospital. There are 4 cases of DAMA and 1 cases of death in the patients admitted to NICU.

Table 1: Different Parameters of the

Parameter	No. of Cases
Birth Place	
In Hospital	32
Outside Hospital	18
Gender	
Male	35
Female	15
Gestation:	
At term	41
Before term	9
Birth Weight	
Normal	22
Low Birth Weight	20
Very Low Birth Weight	5
Extremely Low Birth Weight	3
Duration of Hospital stays	
Less than 1 day	3
1 to 3 days	35
3 to 7 days	7
More than 1 week	5
Outcome of Stay	
Discharge	42
Referral to others	3
DAMA	4
Death	1

In present study author's tried to present neonatal morbidity pattern and outcome parameters from secondary care neonatal centre in a developing country. Inequities in child mortality across and within countries remain large. As compared to developed countries, neonatal mortality is still high in developing countries. A child in Southern Asia is nine times more likely to die in the first month than a child in a high-income country. As our NICU is overburdened with a lot of admission rate, many studies of neonatal care have shown a high mortality rate in hospitals with higher volumes of patients than in those with lower volumes [10].

This was in line with the findings from the study conducted by Modi *et al*. [11] Neonatal jaundice was the single most cause of admission in NICU and this was similar to the findings from study done by Harsha *et al*. [12] Sepsis, respiratory distress syndrome, meconium aspiration syndrome and birth asphyxia were the other leading causes of admission. Duration of stay in NICU was slightly higher for out born when compared to inborn babies. This may be due to the fact that the inborn neonates arrive at the NICU earlier and faster as compared to out born neonates. Due to this the out born neonates would need higher and longer duration of care at the hospital.

Successful discharge was higher (88.3%) and mortality rate was lower (5.9%) in this study compared to the study by Gauchan *et al*. [13] Neonatal mortality was higher in low birth weight and preterm babies, similar to several other studies [14].

In India, which has a population close to 1.3 billion, there is a

need to have a database both at national and regional levels, with analyses of neonatal, infant and child (under the age of 5 years) deaths. This could help in assessing and targeting the health resources towards child survival measures across all over with special emphasis on areas with high child mortality [15].

Conclusion

Hence from the present study it can be conclude that Neonatal jaundice, preterm and low birth weight babies had significantly high mortality even with standard intensive care. Maternal and neonatal health care policies should be further strengthened for prevention of complications related to birth. The present study showed the various aspects of the patients admitted to the NICU and the discharge against the medical advice cases.

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