ORIGINAL ARTICLE

REASONS OF SELF-DISCHARGE FROM NURSERY OF A TERTIARY CARE HOSPITAL

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Background: Patients who leave against medical advice (LAMA) from a health facility is a recognized problem. In neonatology practice this issue is particularly sensitive as repercussions can be severe. The purpose of this study was to evaluate the factors influencing the decision of parents to self-discharge their babies against medical advice. **Methods:** This descriptive case series was conducted in the Department of Neonatology, of the Children's Hospital and the Institute of Child Health, Lahore from January to June 2015. A total of 240 patients who self-discharged/were included. **Results:** There were (59.6%) males and (40.4%) females with a male to female ratio of 2:1.5. Term babies constituted (67.9%), spontaneous vaginal deliveries (59.1%) and (55.8%) were delivered at hospitals. Seventy seven new-borns (32.2%) had birth asphyxia followed by neonatal sepsis (27.9%). Sixty four (64.5%) self-discharged within first week of admission. More babies were signed LAMA at week end (32.1%). Likewise (53.1%) babies were self- discharged during the night shift. Highest rate of LAMA was seen in parents belonging to low socioeconomic class (72.1%). Ninety eight parents (40.8%) had no formal education while well-educated parents were found to be 35 (14.6%). The commonest reason for self-discharge was "perceived poor clinical outcome" (36.7%) by parents. **Conclusion:** Multiple factors were implicated in self-discharges from neonatology unit. Commonest reasons cited by parents were perception of poor clinical outcome and family pressures. Other contributory factors were male gender; those delivered vaginally, diagnosis of birth asphyxia, first week of life, at weekends and night hours. Low socioeconomic class and education of parents was also a major causative factor.

Keywords: LAMA, Self-discharge, Neonates, Tertiary care

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INTRODUCTION

Self-discharge, i.e., leaving against medical advice (LAMA)] is a universal problem and is not limited to the developing world. The incidence of self-discharge is reported to be between 1% and 6% per year in developing countries[1] and 1–2% in developed countries[2].

World over self-discharge, i.e., LAMA is defined in different ways. LAMA has been defined as getting the baby discharged prematurely from hospital by parents against the advice of the treating neonatologists.[2,3]

Self-discharge (LAMA) poses a unique challenge to neonates as they not only have emotional and cognitive immaturity but also have no legal rights to decide for themselves.[1] So the fear of legal implication also remains a source of concern for treating physicians. Hence hospitals often require parents to sign a formal document of self-discharge.[3] Self discharges (LAMA) also have an impact on patient's health, hospital costs and re-admission rates (which range from 20.7–24.5%).[4,5]

Possible reasons for self-discharge (LAMA) may include parental perception of child's improvement, financial constraints, problem of hospitalization, dissatisfaction of management and preference for traditional forms of treatment.[2–4] Research reveals that patients who self-discharge are at an increased risk of adverse outcomes.[6] With Pakistan having a neonatal mortality rate amongst top five countries in the world[7] and a daunting task ahead to meet goals set by Sustainable Development Goals and A Promise Renewed and Every New-born Action Plan[8], it remains important to identify factors leading to self-discharge so as to prevent this practice ultimately improving neonatal mortality. Furthermore, with only a few having access to health care, it is imperative that those who get services should be discharged only when they are fit to go home. Identifying the reasons of self-discharge (LAMA) in our set-up shall help us to identify those at higher risk of self-discharge and shall address the implications that can otherwise occur e.g. increase in morbidity, mortality, and health care costs.[9]

Despite the enormous clinical, economic, ethical and medico-legal implications of self-discharge (LAMA), especially in developing countries like ours, it has largely remained an under researched area particularly in neonates and children. We have endeavoured to discover the reasons of LAMA in our set up of tertiary care neonatal unit with an aim that its findings may help to formulate better health care

policies leading to reduction in preventable neonatal morbidity and mortality.

MATERIAL AND METHODS

This descriptive case series was conducted in the Department of Neonatology, of the Children's Hospital and the Institute of Child Health, Lahore from January to June 2015. The study was conducted after obtaining permission from local IRB.

Non-probability purposive sampling technique was used. All those cases were included who self-discharged (LAMA) from the Neonatology Department including NICU, high dependency unit and special care sections and whose parents/guardian consented to furnish required information. A *pro forma* was designed to note down the required information including name, age, gender, diagnosis, place and mode of delivery, socioeconomic status, parental educational level, clinical state of patient at the time of LAMA and reasons given by the parents for LAMA. Those cases were excluded where the information was found to be incomplete.

Data was analysed using computer software SPSS version 20. The results for quantitative variables like age, length of stay at hospital were described as mean and standard deviation while for categorical variables like gender, diagnosis, mode of delivery, results were presented in frequencies and percentages.

RESULTS

A total of 4827 babies were admitted during the study period of six months from 1 Jan till 30 Jun 2015. Out of these 244 cases that fulfilled the criteria were included in the study. Four cases were excluded because of incomplete information. Finally the information gathered for 240 babies was used for analysis.

Males constituted 143 (59.6%). The male to female ratio was 2:1.5. Their weight at admission ranged between 0.8–4.3 kg. Low birth weight babies constituted 107 (44.6%) of the total. Those delivered at term were 163 (67.9%) while 77 (32.2%) were pre-terms.

Ninety nine babies (41.3%) self-discharged at ≤1 day of age followed by babies between ≥1–3 days of age (n=62, 25.8%). Proportion of self-discharged babies in other age groups is given in table-1.

Spontaneous vaginal deliveries comprised 142(59.1%). Out of the total self-discharged babies, 134 (55.8%) were delivered in hospitals, 48 (20%) in clinics and 58 (24.2%) were home deliveries.

Seventy seven new-borns (32.2%) had birth asphyxia, 67 (27.9%) were diagnosed as neonatal sepsis and 44 (18.4%) as preterms. More than one problem was found in 11 (4.5%) babies (Figure-1).

Sixty seven new-borns (27.9%) were self-discharged within first day of admission, 118 (49.2%) during 1–3 days, 37 (15.4%) during 4–7 days and 20 (8.3%) during 8–28 days. (Table-2)

As regards the section of neonatal unit, 188 (78.7%) neonates self-discharged from High Dependency Unit, 43 (17.9%) from Special Care Section and 9 (3.8%) from NICU.

Out of total of 240 self-discharged babies, an average of 13.5% (n=32.4/day) new-borns were discharged per day during five working days while 16% were taken away on each day of weekend (Saturday and Sunday). Regarding time of the day, 126 (52.5%) babies self-discharged (LAMA) at night (8.00 p.m. to 8.00 am) while 114 (47.5%) left during day time (8.00 am to 8.00 pm). It was found that 173 (72.1%) new-borns belonged to low socioeconomic class, 63 (26.3%) to middle class and 4 (1.7%) to upper class. The concerned number of well-educated parents was found to be 35 (14.6%). The details are given in table-3. Reasons given by parents are detailed in figure-2.

Table 1: demographic profile of self-discharged (LAMA) neonates

Characteristics		n (%)
Gender	Male	143 (59.6%)
	Female	97 (40.4%)
Age	<1 day	99 (41.35)
	1–3 days	62 (25.8%)
	4–7 days	28 (11.7%)
	>8 days	51 (21.3%)
Weight	<1 kg	15 (6.3%)
	1–1.5 kg	31 (12.9%)
	1.5–2.5 kg	107 (44.6%)
	2.5–3.8 kg	77 (32.1%)
	>4 kg	4 (1%)

Table-2: Duration of admission and place of stay in ward

Duration of hospital stay	n (%)
<1 day	67 (27.9%)
1–3 days	118 (49.25)
4–7 days	37 (15.4%)
8–28 days	20 (8.3%)
Place of stay in ward	
NICU	9 (3.8%)
HDU	188 (78.7%)
Special care unit	43 (17.9)

Table-3: Socio-demographic characteristics of patients (n=240)

Characteristic	Number of patients (%)
Father's education	
No formal education	98 (40.8%)
Primary	69 (28.8%)
Matriculation	38 (15.8)
Above matriculation	35 (14.6%)
Father's job status	
Self employed	63 (26.3%)
Govt. service	41 (17.1%)
Private services	43 (17.9%)
Labourer (unemployed)	93 (78.8%)
Working parents	
Father only	234 (97.5%)
Mother only	Nil
Both parents	6 (2.5%)
Socioeconomic status	
Low class	173 (72.1%)
Middle class	63 (26.3)
Upper class	4 (1.7%)

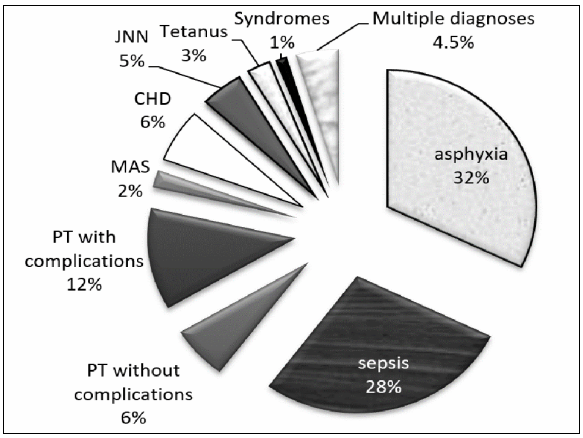

Figure-1: Commonest diagnosis among neonates who had LAMA

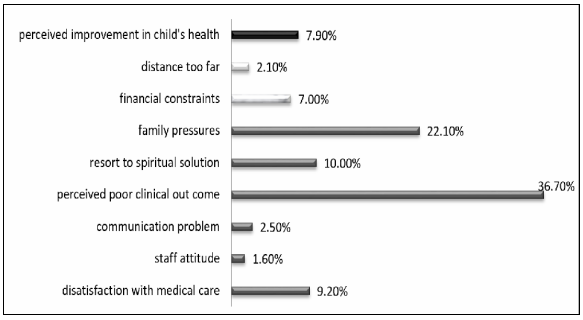

Figure-2: Reasons given by parents for LAMA

DISCUSSION

Self-discharge (LAMA) is also considered as a form of child neglect.[9] These patients are taken away by parents/guardian without consideration of the subsequent medical problems that may arise, including increased risk of dying post discharge.[6]

Leaving against medical advice is a problem that is commonly found among paediatric patients as compared to adults. Further analysing the paediatric patients, the frequency of self-discharge is highest among infants and neonates.[1] Since new-borns cannot decide for themselves, the prejudiced decision is taken by family in favour of self-discharge, hence highest number of self-discharges found in neonatal age-group.[1,8]

Roodpeyma and Onyiriuka in their studies, conducted to find out the reasons of self-discharges, found that male babies had higher rate of LAMA.[1,8] These results bear similarity with our study where males constituted 59.6% of self-discharged babies. Male preponderance may be because of gender bias towards baby boys, which is a universal phenomenon, as a result of which more boys are brought for admission.[10] Also boys are more susceptible to infections and premature death due to differences in genetic and biological make up[11] which results in their higher admission rate and lower recovery rate which in turn leads to the dissatisfaction of parents in treatment of their babies, longer hospital stay and hence higher self-discharge.

The mothers that deliver vaginally recover earlier than those mothers that have undergone Caesarean section, hence their earlier discharge from health facility and tend to take their new-borns with them.[12–14] The results of our study also support this as we found that rate of self-discharges was highest for babies delivered vaginally (59.1%, n=142).

Eke & Opara showed that 54% of children got their self-discharge within first week of admission.[13] Our study has similar results where 56% were self-discharged within first week. The reasons of earlier self-discharge included family pressures, perception of poor outcome and financial constraints.

In studies conducted in Nigeria leading diagnoses in cases of LAMA were found to be sepsis, asphyxia, prematurity and jaundice.[1,8,13,14] Similar pattern was observed in our study where 77 (32%) had asphyxia, Followed by neonatal sepsis in (27.9%) and prematurity (18.4%). These diagnosis have also been identified by WHO as the greatest cause of mortality of new-borns in the developing world.[7]

In a study by Hatim k *et al* association was found between self-discharges and the days of the week. During weekends (Saturday & Sunday) 37% babies were self-discharged by parents.[12] Similar trend was seen in our study where 38.5% per day of LAMA was signed during weekends while 32.4% per day were self-discharged during the remaining days of week. Moreover, 126 (53.1%) babies were self- discharged in our study during the night shift. Major reasons furnished by the parents for self-discharge during weekends and night time were perception of poor clinical outcome (35% & 43.6% respectively), followed by family pressures in 31.1% and 16.2% cases respectively.

Socio-economic status (SES) of the parents is considered one of the major factors related to LAMA in most of the studies conducted on self-discharged neonates. The studies conducted by both Onyiriuka & Onankpa showed that 69.9% and 54.8% parents who self-discharged their babies belonged to lower SES.[8,14] The results are comparable to our study where 72.1% (n=173) of the self-discharged cases belonged to parents of low SES.

There are a variety of reasons for LAMA discussed in other articles published from Iran, Saudi Arabia and Nigeria; including financial constraints, assumption of child being well enough for discharge, dissatisfaction with medical treatment, inconvenience of hospitalization, family pressures and certain socio-cultural beliefs.[1,8,12,14] The reasons presented by parents in our study are no different from these studies but their frequency is different. Most common reason cited by Roodpeyma in her study done in Iran was parents' assumption of baby's improvement in clinical

condition.[1] In both the studies conducted in Nigeria by Onyiriuka and Onankpa, financial constraint was the predominant cause of self-discharges.[8,14] In our study perception of poor clinical outcome and family pressures were the leading causes. The differences may be explained on our different social and cultural beliefs which are characterized by strong and extended family ties and where near relatives have a predisposition to act as primary caregivers and are involved in making decisions. This fact was also illustrated in other studies by Hatim Turk.[12]

CONCLUSION

Higher rate of self-discharges was found in male babies, term new-borns, LBW, first day of life, first day of admission, hospital deliveries, SVDs, asphyxia, during night hours, at weekends and in low socio-economic class. While minimum number of LAMA was seen in babies admitted in NICU and born to educated parents.

Major reasons included perception of poor clinical outcome of the new-borns and family pressures. The uncommon reasons comprised of seeking alternate medical or spiritual care, perception of babies being well enough to require further hospital stay, dissatisfaction with medical care and financial problems

In conclusion, this study highlighted the factors associated with self-discharges/LAMA. These factors cannot be ignored because they have been noted in other studies also. Also knowing these reasons helps us to understand the problems being faced by the parents of the hospitalized babies, so that we might avoid part of future self-discharges and related potential health damages to the self-discharged babies.

Limitation of the present study was inability to follow up babies who LAMA to determine their outcome.

We recommend a more detailed study on a larger scale to evaluate the rate of readmission of those neonates who LAMA.

AUTHOR'S CONTRIBUTION

RA: Concept and design of study, acquisition, analysis and interpretation of data, drafting and revision. KAIW, MA: Drafting and revision. RG: Data collection and statistical analysis. SH: Literature review. STF: Statistical analysis and result formulation. MA: Drafting and literature review.

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