HOSPITAL DISCHARGES OF SICK NEONATES AGAINST MEDICAL ADVICE

Joel-Medewase V.I, Adebami O.J and Oyedeji O.A

ABSTRACT

Objective: To determine the frequency of discharges against medical advice (DAMA) at the Ola Oluworo Catholic Hospital, Oke-Offa, Ibadan, Oyo State, and the reasons why DAMA requests are made.

Study design: A prospective study of 35 consecutive neonates who were discharged against medical advice at the neonatal unit of Ola Oluworo Catholic Hospital, Oke-Offa, Ibadan, Oyo state. The study was conducted between 1st of January and 31st of June 2012.

Methods: Information was obtained from the case notes and parents of the 35 neonates and entered into a proforma designed for the study. Details obtained include age at admission, diagnosis at admission, number of days hospitalized and the reasons for requesting DAMA.

Results: Of the 240 babies admitted to the neonatal unit over the six months, 35 (14.6%) were discharged against medical advice. The 35 neonates consisted of 19 boys and 16 girls. The mean number of days on admission was 5 days. The admission diagnoses include birth asphyxia, prematurity, low birth weight, neonatal septicemia, macrosomia, neonatal jaundice, very low birth weight, meconium aspiration, respiratory distress related diseases, HIV exposed neonate and Ophthalmia neonatorum in 9 (25.7%), 6 (17.1%), 5 (14.3%), 4 (11.4%), 3 (8.6%), 2 (5.7%), 1 (2.9%), 1 (2.9%), 1 (2.9%) and 1 (2.9%) cases respectively. Regarding the reasons for requesting DAMA, 20 (57.1%) by parents felt that the babies were well enough to be discharged, whilst 13 (37.1%) gave financial constraints as reason and one parents requested for DAMA to enable resumption at work. No reason was stated in the remaining one (2.9%) case. Payment of bills at discharge was by the father in 30 (87.5%). All the parents were counselled by the nurses on duty and only 2 cases had additional counsel by the doctor at DAMA.

Conclusion: The frequency of DAMA in the present study which is almost one in seven admissions is unacceptably high. Concerted efforts should be made to reduce it by means of more detailed studies of associated factors and interventions.

INTRODUCTION

Discharges against medical advice (DAMA) are a global problem confronting physicians. (Paul, Remorin, 2010; Okechukwu, 2011; Al- Sadoon, Al- Shamousi, 2013) It is a source of concern because the patients discharged against medical advice are vulnerable and require expert care. Once discharged against medical advice accessing comprehensive health care may be further compromised. The important parties in DAMA in adults are usually the health care provider and the patient himself or herself. On the other hand the parents or the guardian and the health care provider are the parties involved in children because children are considered to have inadequate emotional and cognitive maturity as well as legal rights to determine whether or not to continue hospital care. (Macrohon, 2012). Studies emanating on DAMA in the newborn in developing countries are very few, even though according to Ibeekwe discharges against medical advice are probably most common among the neonatal age group. (Ibeekwe, 2009) Neonates are vulnerable and there is a need to determine the reasons why this age group are discharged against medical advice with a view to preventing these premature discharges.

Methodology

Consecutive neonates discharged against medical advice, from the Neonatal Unit of the Ola Oluworo, Catholic Hospital, Oke- Offa, Ibadan, Oyo State, between 1st of January 2012 and June 31th 2012 were prospectively studied. Information was obtained by the use of a proforma and the details obtained include age at admission, sex, birth weight, place of birth, diagnosis and number of days hospitalized. Other details obtained include identification of the care giver requesting discharge against medical advice, the reasons why caregiver wanted the neonate discharged against medical advice and socioeconomic status of the patient. Socioeconomic classification of the parents was determined by using Oyedejis socio-economic classification. (Oyedeji, 1986) This is based on the mean of a set of scores, assigned for the educational attainments and occupation for the parents. Scores of 1 – 5 were assigned to each education or occupation category. The mean scores are approximated to the nearest whole number. Scores of 1 and 2 correspond to the upper socioeconomic classes, while a score of 3 is equivalent to the middle class and scores of 4 and 5 to the lower socioeconomic classes. Highly skilled individuals with university degrees or their equivalents ultimately fall into the upper socioeconomic classes while unskilled people who can barely read or write occupy the lower socioeconomic

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classes. Data analysis was by simple inferential statistics. The means and ranges of continuous variables were determined while categorical variables were analyzed using percentages. Thus the range and mean of the age of baby at admission, birth weights, duration of hospitalization, age of the parents were computed. Percentages of other data such as indications for admissions and reasons for DAMA were also computed.

RESULTS

Population studied

During the 6 month period of study 240 neonates were admitted into the neonatal unit. The 240 babies consist of 130 boys and 110 girls. Thus the male to female ratio for babies admitted is 1.2:1. Of the 240 babies admitted 35(14.6%) were discharged against medical advice

Age and sex distribution

The 35 neonates discharged against medical advice were made up of 19 boys and 16 girls giving a male: female ratio of 1.2:1. The ages of the babies ranged from 30mins at admission to five days. The average age at admission is 10.35hours.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of neonates</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth asphyxia</td>
<td>9</td>
<td>25.7%</td>
</tr>
<tr>
<td>Prematurity</td>
<td>6</td>
<td>17.1%</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>5</td>
<td>14.3%</td>
</tr>
<tr>
<td>Neonatal septicaemia</td>
<td>4</td>
<td>11.4%</td>
</tr>
<tr>
<td>Macrosomia</td>
<td>3</td>
<td>8.6%</td>
</tr>
<tr>
<td>Neonatal jaundice related</td>
<td>2</td>
<td>5.7%</td>
</tr>
<tr>
<td>Very Low birth weight</td>
<td>1</td>
<td>2.9%</td>
</tr>
<tr>
<td>Meconium aspiration</td>
<td>1</td>
<td>2.9%</td>
</tr>
<tr>
<td>Ophthalmia Neonatorum</td>
<td>1</td>
<td>2.9%</td>
</tr>
<tr>
<td>Respiratory distress related</td>
<td>1</td>
<td>2.9%</td>
</tr>
<tr>
<td>HIV exposed baby</td>
<td>1</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Birth weights

The weight at birth of the neonates ranged from 1kg to 4.9kg. The mean birth weight of the population studied is 3.1kg. Of the 35 neonates 1(2.9%) was very low birth weight, while 5(14.3%) were low birth weight, 19(54.3%) were normal birth weight and 3(8.6%) were macrosomic. The remaining 7(20.0%) neonates had unspecified birth weights as the babies were delivered outside the study centre and their weights at birth were not known by the caregivers or specified on the referral notes.

Gestational age of the studied neonate and mode of delivery

The gestational age of the neonates were classified into postterm, term and preterm. Of the 35 neonates DAMA 6(17.1%) were preterm and 29(82.9%) term. Of the 35 neonates 30(85.7%) were delivered per vagina and 5(16.7%) were delivered by caesarean section

<table>
<thead>
<tr>
<th>Age range</th>
<th>Number of fathers in age range (%)</th>
<th>Number of mothers in age range (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20 years</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20 - &lt;25 years</td>
<td>0</td>
<td>4(11.4%)</td>
<td>4 (5.7%)</td>
</tr>
<tr>
<td>25 - &lt;30 years</td>
<td>5(14.3%)</td>
<td>8(22.9%)</td>
<td>13(18.6%)</td>
</tr>
<tr>
<td>30 - &lt;35 years</td>
<td>8(22.9%)</td>
<td>18(51.4%)</td>
<td>26(37.1%)</td>
</tr>
<tr>
<td>35 years and above</td>
<td>22(61.1%)</td>
<td>5(14.3%)</td>
<td>27(38.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
</tbody>
</table>

Admission diagnoses

Birth asphyxia was the most common diagnoses on admission among the neonates studied. Other diagnoses include Neonatal sepsis, Prematurity, Low birth weight, Neonatal jaundice, Macrosomia and Ophthalmia Neonatorum. Table 1 shows the various diagnoses at admission and the number and percentages of neonates involved.

Parents age

The mothers ages ranged from 22 – 39 years with a mean of 30.1years, while the fathers ages ranged from 25 – 44 years with a mean of 33.9 years. Table 2 gives more details on the ages of the fathers and mothers studied.

Number of days hospitalized

The neonate with the shortest admission was hospitalized for a day, while the longest admission was for duration of 13 days. The mean number of days spent on hospitalization by the neonates in this study is 5 days.

Bill at discharge against medical advice

The bill at discharge ranged from N7,000 – N41,150($43 - $248). The average bill estimated for admission is N13,650($82). The bills were settled by the fathers in 30(85.7%) of the 35 children studied and by the paternal grandfather in 2(5.7%) cases. It was settled by the mother, the company the father worked for and NHIS Scheme respectively in one case each in the remaining three children.

Clinical condition of the Baby at DAMA

Of the 35 children discharged against medical advice their medical condition was judged by the doctor in charge to be improved at DAMA in 34(97.1%) in comparison to the status on admission, while the clinical condition at discharge was judged to be the same as at the point of admission in the remaining case(2.9%). None was judged very ill or worse than on admission, but none was judged to be fit for discharge as at yet.

Signatory to discharge against medical advice form

The fathers were the signatories to the DAMA form in 24(68.6%) of the 35 babies, while the mothers were signatories in 8(22.9%). The grandfather was the signatory in 2(5.7%) and the signatory was not specified in one case (2.9%).

Reasons for discharge against medical advice

The most common reason for wanting the baby to be discharged against medical advice was a feeling that the baby was well enough to be discharged in 20(57.1%) cases. Financial constraints by the care giver was the reason for seeking for discharge in 13(37.1%) of the 35 cases, while the care giver had to return to work in one case (2.9%) and no reason was stated in the remaining one case(2.9%).

Socioeconomic classes and Reasons for discharge against medical advice

Three of the babies were from social class I, 14 were from social class II, 8 from social class III, 6 from social class IV and 4 from social class V. Thus 17(48.6%) babies were from the upper social classes, eight(22.9%) from the middle social class and 10(28.6%) from the lower classes. Seven(53.8%) of the 13 caregivers who discharged their babies against medical advice because of financial constraints were from the lower socioeconomic class,
while 3 (23.1%) were from the middle class and the remaining 3 (23.1%) were from the upper social class II.

**Destination after DAMA**

Twenty six (74.3%) of the caregivers indicated that the babies discharged against medical advice would be taken home. Six (17.1%) caregivers indicated that the babies would be taken to the extended family home for further care, while a care giver indicated that the baby would be taken to their family doctor and another care giver stated that the baby will be taken to another public hospital. A care giver however did not indicate where the baby would be taken to post DAMA. None of the 35 patients however returned for re-admission.

**Health personnel who counselled those who requested discharge for the babies**

All the 35 neonates parents/caregivers were counselled by a nurse against DAMA and possible consequences. A doctor also joined in the counselling of 2 cases. The counselling consisted of explaining to the caregivers or parents requesting the discharge why his or her particular baby was not yet fit for discharge and what health risks were inherent in DAMA.

**DISCUSSION**

Discharge against medical advice (DAMA) occurred in 14.6% (almost one in seven) neonatal admissions in the present study. This rate is higher than those reported in some previous Nigerian studies of neonatal admissions. It is higher than the 1.9% in Ilesa, Western Nigeria reported by Oyedeji et al in 1983 and than the 10.6% in Osogbo reported in 2010 by Adebami et al as well as than the 12.6% in Benin city reported by Osaghae et al in 2013 (Oyedeji, 1983; Adebami et al., 2010; Osaghae et al in 2013). The 14.6% occurrence rate is also much higher than the 0.96% of 18,606 childhood admissions in Ilesa reported by Oyedeji in 1986 and 1.8% of children’s admission in Enugu reported by Ikefuna et al in 2002. (Oyedeji, 1986; Ikefuna and Emodi I., 2002). The two latter studies included children of all age groups. The stated estimates indicates that the percentages of discharges against medical advice in neonates have been increasing in Nigeria especially in recent years – from 10.6% in 2010 to 12.6% in 2013 and 14.6% in the present study. The medical literature on DAMA in neonates from abroad have not shown such similar rate of increases for example the rate recorded in a study from middle east was only 0.32%. One observation is that even in Nigeria the rates in neonates are higher than those recorded in studies that include children of older age group e.g 0.96% by Oyedeji et al and 1.8% by Ikefuna et al (Oyedeji, 1986; Ikefuna and Emodi I., 2002). Ibeke et al had previously noted and commented on the higher rates in neonates.

Yet one would expect parents to regard the health and illnesses of neonates to be delicate and needful of specialised care and therefore not to resort to self discharge as frequently as in the older age groups. Admittedly this would take more finance and attention from them. Since most of the babies were admitted on the day of birth and the mean duration of hospitalization was only five days, it is possible that some of the mothers may have requested discharge to satisfy their desire to celebrate the naming ceremony which is usually fixed on the eighth day among their kith and kindred at home. This was however not stated as reasons for requesting DAMA. There could have been other unstated reasons too. The fact that 57.1% of the caregivers requested DAMA because they felt that the babies were well enough for discharge is actually no reason. Rather it lends credence to the speculation that there could have been other unstated reasons. The parents who requested DAMA were not medically trained to appreciate what would be the objective signs of subsequent improvement to recommend discharge. To the untrained eye a sick neonate could look well. Ideally, normal discharges are usually given periods of outpatient follow up. The process of DAMA may inhibit this practice.

There are other possible reasons for requesting DAMA. Mothers in hospitals may have worries about older children at home or other important social or family functions. Also the care in Nigerian hospitals is far from ideal and consumer dissatisfaction, arising from the rigors, physical as well as emotional strain which the mothers and sometimes other caregivers undergo in watching and nursing babies on admission may well be part of the reasons for requesting DAMA. One factor associated with DAMA in previous Nigerian studies has been that of socioeconomic status. The findings that 37.1% of the caregivers said that financial constraint was the reason for seeking DAMA is consistent with the fact that 53.8% of the 13 caregivers who took DAMA because of financial constraints were from the lower social classes. This finding highlights the significance of poverty among the Nigerian populace and its effect on health care. The average Nigerian is poor and poverty is pervasive. This finding suggests worsening economic and social living conditions. Our observation of the predilection of DAMA for lower social classes is consistent with results from previous studies (Okechukwu, 2011; Ibeke et al., 2008; Ikefuna and Emodi, 2002).

The range of hospital bills settled in the current study may be negligible amounts in dollars, but they can constitute an embarrassment to the economies of poor families. The findings from the present study also show that the implementation and extent of NHIS coverage for Nigerians needs to be reviewed and modified to meets the need of the populace. At the moment the coverage is inadequate. How can the incidence of the important and growing problem in paediatric hospital care be reduced in Nigeria? Both the care giver(Parents etc) and ward staff have important roles to play. There may be a need for better counselling and education of parents on the natural history of childhood illnesses. The managing doctors need to be more involved than they presently are. Religious leaders and social workers can also play helpful roles which in the case of missionary hospitals can be added to the duties of hospital chaplains. The continuing prominent contribution of financial constraints to the high frequencies of DAMA suggest that the part played by the National Health Insurance Scheme as is presently instituted is still insufficient to satisfactorily improve access to medical care. It needs rethinking, reworking and re-modification.

**Acknowledgement**

We thank all the doctors and nurses working at the neonatal unit of Ola Oluworo Catholic Hospital, Oke Offa, Ibadan, Oyo State for providing the enabling and friendly working conditions for this research. The co-operative disposition of the parents of the babies studied towards this study is also appreciated. The contributions of Prof. G.A Oyedeji are also gratefully acknowledged.

**References**

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