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Discharge against medical advice amongst patients admitted into the Paediatric wards of the University of Port Harcourt Teaching Hospital

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Abstract Objectives: To identify the characteristics of patients and factors contributing to DAMA in paediatric patients admitted into the University of Port Harcourt Teaching Hospital and to determine ways to reduce its prevalence.

Method: This was a retrospective study of children admitted into the paediatric wards of the Hospital. Case files of affected patients over a two year period were reviewed and relevant information obtained and analyzed.

Results: There were 150 of 3981 patients admitted over the period giving a prevalence rate of 3.8%. There were 86 (57.3%) males and 64 females (42.7%) with a male:female ratio of 1.3:1. Neonatal sepsis, birth asphyxia and prematurity were the commonest diagnosis in neonates whilst severe malaria, meningitis and bronchopneumonia were the commonest in other children. Most discharges (54%) occurred within the first week of ad-

mission. Majority of patients were from low (35.3%) and middle (41.3%) income classes. The commonest reasons for DAMA were lack of funds (26.6%) and no improvement (26.6%), necessitating need to seek alternative therapy. The discharge document was signed by the father in 61.3% of cases.

Conclusion: Children who were DAMA suffered from common causes of childhood mortality. Lack of funds, no improvement and lack/low decision making power of mothers were contributory factors. There is need for more universal implementation of the National Health Insurance Scheme; effective communication between medical team and parents and female empowerment to reduce rates of DAMA in our environment.

Key words: Discharge against medical advice, children, paediatric wards.

Introduction

Discharge against medical advice (DAMA) is an adverse clinical event that culminates in the patient's withdrawal of their initial voluntary consent for hospitalization and abrupt termination of in-patient medical care.^{1,2} It is a worldwide phenomenon with great variation in incidence,³ ranging between >20% in large urban hospitals to <1% in small rural hospitals and medical wards, depending upon patient population and type of treatment setting.^{3,4} A well recognized problem in medical practice, it has important health consequences as these patients are exposed to the risks of inadequately treated medical problems, including increased risk of re-admission with its consequent higher health care cost.^{5,6}

Despite its poor health indices, DAMA has also been reported in Nigeria in both children and adults.^{1,2,7-10}

With an estimated one million children dying each year before their fifth birthday¹¹ and a limited access to health,¹² it is important that children who get to health facility be discharged when they have recovered from their illnesses. Various studies, however, have documented that up to 7% of children are DAMA.^{7-10,13} These children, especially the under-fives, are victims because they do not take decisions, cannot understand or contribute to these decisions and are thereby exposed to increased morbidity and mortality.

The aims of the study were to identify the characteristics of patients and the factors contributing to DAMA amongst paediatric patients admitted into the University of Port Harcourt Teaching Hospital (UPTH) and to identify the factors that can reduce its prevalence

Patients and Methods

The case records of patients who signed against medical advice amongst children admitted into the various paediatric wards of the UPTH, over a 2-year period (January 2007 – December 2009), were retrieved from the Records Department and reviewed.

The UPTH serves as a general/referral centre for neonates and children in Port Harcourt and its environs. There are three major wards where children are admitted in the hospital. These are the Special Care Baby Unit, where neonates are admitted; the Children Emergency Ward, where emergencies beyond the neonatal period are admitted and stabilized before being moved into the Children's medical wards.

In the event of a request for DAMA in any of these wards, the attending physician and/or the most senior nurse on duty, are called in to discuss with, and counsel the parents/caregivers on the need for continued hospitalization. When they insist on discharge despite counseling, they are made to sign the discharge document which has provision for reasons for the request, after which they pay outstanding bills before leaving hospital.

Children who were DAMA in all the wards were identified from the Nurses records and case notes retrieved. Information obtained included biodata, diagnosis, duration of hospital stay, Socio-economic status, reasons for DAMA and signatory to the discharge document. Patients were grouped into social classes according to the system of Oyediji¹⁴ using educational levels and occupation of parents. Those in Socioeconomic classes I and II were grouped as high; those in III as middle and those in IV and V as low income groups.

Data were entered into a Microsoft Excel Spread Sheet and analyzed using SPSS version 15.0. Chi-Square test was used to test for significance. P values < 0.05 were considered significant.

Results

In the two year period under review, 150 children were DAMA out of 3981 admitted, of which 1481 were neonates, giving a prevalence rate of 3.8%. There were 86 (57.3%) males and 64 females (42.7%) with a M:F ratio of 1.3:1. The ages of the patients ranged from one day to 14 years. Majority were Under-fives (88.7%), of which 40% were neonates. (Table 1)

Neonatal sepsis, birth asphyxia and prematurity were the commonest diagnoses in neonates that DAMA whilst severe malaria, meningitis and bronchopneumonia were the commonest in older children, as shown in Table 2. Some children had more than one diagnosis.

Table 1: Age and gender of study population

Age at admission	Number	Percentage
0 – 28 days	60	40
1 – 12 months	45	30
13 – 36 months	24	16
37 – 59 months	4	2.7
5– 10 years	11	7.3
> 10 years	6	4
Total	150	100
<i>Sex of patients</i>		
Male	86	57.3
Female	64	42.7
Total	150	100

Table 2: Commonest diagnosis among children who were DAMA

Diagnosis	Number	Percentage
<i>Neonates (n=60)</i>		
NNS/infections	21	35
Birth asphyxia	17	28.3
Prematurity	15	25
Neonatal jaundice	5	8.3
Cong anomalies	4	6.6
<i>Older children (n=90)</i>		
Malaria	20	22.2
Meningitis with sequalae	16	17.7
Bronchopneumonia	13	14.4
AIDS	9	10
Sickle cell anaemia	8	8.8

Table 3 shows duration of hospital stay. The average duration of stay in hospital was 5.9±4.6 days in neonates and 8.9±5.2 days in older children. Majority of DAMA (54%) occurred in the first week of admission, 50% of which were neonates.

Table 3: Duration of hospital stay of children DAMA

Duration of stay	Frequency	Percentage
≤ 1 day	12	8
2 – 7 days	69	46
8 – 14 days	53	35.3
> 14 days	16	10.7
Total	150	100

Table 4 shows the socioeconomic status of the parents/care givers and signatories to the discharge document. Sixty-two (41.3%) and fifty-three (35.3%) of the patients were from middle and low income classes respectively. The discharge document was signed by the father in 61.3% of cases, and the mother in 18%. Others were grandfathers/mothers, uncles and cousins. In 23 (15.4%) of cases the discharge document was signed but the relationship between the signatory and the patient was not stated.

Table 4: Socioeconomic status of parents/ care givers and signatories to the discharge document

Socioeconomic status	Frequency	Percentage
High	23	15.4
Middle	62	41.3
Low	53	35.3
Unknown	12	8
Total	150	100
<i>Signatories to the discharge document</i>		
Father	92	61.3
Mother	27	18
Others	8	5.4
Not stated	23	15.3
Total	150	100

Table 5 shows reasons for DAMA. The commonest reasons for DAMA were lack of funds (26.6%), no improvement (26.6%) and perceived improvement (22.6%). In 12% of cases, reasons were not stated. Unacceptability of treatment for religious reasons (refusal of blood transfusion) was an important but uncommon reason for DAMA (3.3%). Some had more than one reason for DAMA.

Table 5: Reasons for requesting for DAMA

Reasons	Frequency	Percentage
Lack of funds	40	26.6
No improvement	40	26.6
Perceived improvement	34	22.6
Not convenient	10	6.6
Not necessary	9	6
Religion	5	3.3
Stigma/ cannot cope	5	3.3
Not stated	18	12

Discussion

Discharge against medical advice of children, also considered a form of child abuse and neglect,¹⁵ is an unpleasant experience for both physicians and children as these constitute a vulnerable group and are taken away without considerations of the subsequent medical problems that may arise, including increased risk of dying post discharge.¹⁶ The prevalence of DAMA in the present study was 3.8% and was within the range of other DAMA studies in children.^{7-10,17,18} It was however lower than that found by Okechukwu¹⁰ whose study covered a one year period only and Onyiriuka¹³ whose study was limited to under-five children. Neonates accounted for 40% of DAMA, a finding similar to previous studies highlighting neonates as a high risk group for DAMA in Nigeria,^{7,8} though the difference in this study was not significant ($p=0.48$).

Neonatal sepsis, birth asphyxia, prematurity and neonatal jaundice, also identified as commonest causes of deaths amongst newborns in Nigeria¹¹ and in developing countries,¹⁹ were the commonest diagnoses amongst neonates DAMA. This finding was similar to other studies but the orders of frequency were different.^{7,8} Malaria, meningitis with sequelae and bronchopneumonia accounted for 70% of DAMA in older children. This can somewhat be compared with the study of Ikefuna and Emodi in Enugu where infections accounted for more than 50% of cases of DAMA,⁹ and is in agreement with that of Okechukwu in Abuja who reported malaria, protein-energy malnutrition and gastroenteritis with dehydration as commonest diagnosis of DAMA in children.¹⁰ These are all life threatening conditions and well recognised causes of mortality amongst children in Nigeria, especially the Under-fives.¹¹

It was observed in this study that the majority of children, including neonates, were DAMA within the first week of admission, which is similar to other reports suggesting that these children left the hospital prior to having received adequate treatment.^{9,10,13} The step following DAMA, to find out where caregivers were taking these patients was not explored in this study, being retrospective. However, possibilities are that these patients would seek alternative care either in the private sector with its intending higher cost, in churches with no medical intervention, or may end up with traditional healers or are abandoned to their fate.¹⁵

Low socioeconomic status was a common feature reported by the majority of authors who studied DAMA in Nigerian children,^{7,9,10,13} and who also identified poverty as the key factor. It is therefore not surprising that financial constraints was the foremost reason cited for DAMA in this study. A similar reason was also reported in Bouaké, Côte d'Ivoire²⁰ where it was observed that an increase in paediatric ward DAMA occurred simultaneously with serious budgetary shortfalls in the hospital resulting in inadequacy of medicines and basic equipment. Subsequently, families were seen to be unable to afford the purchase of medicines and supplies necessary for inpatient treatment. Whereas lack of funds was the second reason in Brazzaville²¹ and ranked third in Okoromah *et al's* report,⁸ one of the few Nigerian studies where it was not mentioned as the first reason, it was the fourth reason in a study in Teheran, Iran where nearly all parents lacking health insurance coverage cited financial problems as a reason for DAMA;¹⁸ it was not mentioned at all in more developed countries where main reasons included dissatisfaction with inpatient care, wanting to observe symptoms at home and non medical personal reasons.^{22,23} It is noteworthy that other important reasons for DAMA in this study, no improvement (26.6%) and perceived improvement (22.6%), were also reported in some developing countries^{18,21} including Nigeria,^{8,9,13} as well as in developed ones.^{17,22}

This may largely be an indication of failure of or no counseling of patients admitted, which is essential to enable them understand the illness and recovery process.

Moreover, it has been shown that well-informed caregivers are more likely to take rational health decisions concerning their sick children.^{3,8} It is therefore possible that effective communication/counseling between medical staff and the parents/ caregivers could have prevented some cases of DAMA among children.

Religion was another uncommon but important reason for DAMA. This involved members of a religious sect who for religious beliefs, forbade their children from receiving blood transfusion and subsequently had to DAMA. This again buttresses the fact that children are a vulnerable group subject to adult decisions irrespective of the adverse effects of those decisions on them. With regard to religious based refusal of blood products by parents, courts in the western world are of the opinion that the child's welfare is paramount and blood can be given.²⁴ They reiterate that consideration should be given to parental views and treatment moderated where possible but if conflict occurs, the child's interests always come first. Declaration of children as wards of court when necessary exists in the Child Rights Act of Nigeria,²⁵ but to what extent these laws are enforced remains to be explored.

As reported by another Nigerian author¹³ fathers in this study, as principal and often sole decision makers and custodians of the family's resources in our environment,

signed the discharge document in 61% of cases, whereas mothers who usually stay with the child on admission and are more in contact with attending physicians were signatories in only 18%.

Conclusion

Children who were DAMA suffered from common causes of childhood mortality. Lack of funds, wrong perception of illness and recovery process, and lack/low decision making power of mothers were contributory factors.

Conflict of interest: None Funding: None

Recommendations

There is need for more universal implementation of the National Health Insurance Scheme; effective communication between medical team and parents and female empowerment to reduce rates of DAMA in our environment.

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