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Physicians' Response on Haemophilia Care in South Western Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Original Research Article

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ABSTRACT

Introduction: Haemophilia is a rare inherited bleeding disorder that affects predominantly male because it is an X chromosome linked disorder. The severity of the disease is determined by the percentage of Factors VIII and IX activity in the individuals with Haemophilia.
Objective: The objective of this study was to determine the extent of haemophilia care in the southwestern part of Nigeria. This forms part of a nationwide survey in 2016, focusing especially on whether or not physicians in specific hospitals in the states in south west had ever managed a haemophiliac.
Methods: A self-administered questionnaire titled "Survey on Haemophilia Care in Nigeria" was developed for physicians in order to assess their experience on Haemophilia care in Nigeria. The responses from the Doctors were entered into SPSS (version 23) using the Data Dictionary (on survey of haemophilia) coded table prepared along with the questionnaire.
Results: The self-administered questionnaires were retrieved from 215 physicians in south west, Nigeria. Most of the respondents are from Oyo state, no respondent from both Osun and Ondo states. Also, about two-thirds of the respondents work in a teaching hospital, with majority having Bachelor of Medicine, Bachelor of Surgery (MBBS) as the highest qualification.
Conclusion: The care of haemophiliacs in the south western part of Nigeria needs to be standardized as the study showed that most physicians have no contact with Haemophiliacs.

Keywords: Haemophilia; Physicians' response; multidisciplinary treatment.

1. INTRODUCTION

Haemophilia is a rare inherited bleeding disorder characterized by deficiency of either coagulation factor VIII in Haemophilia A or factor IX in Haemophilia B. The deficiency of these coagulation factors predisposes the patients to abnormal bleeding [1-4]. Clinically, it is difficult to differentiate between Haemophilia A and Haemophilia B except by laboratory tests (factor assays). Haemophilia A is more common than Haemophilia B. Haemophilia is predominantly a disease of male, being an X chromosome linked disorder [1,3].

The prevalence of Haemophilia varies significantly among countries, from 10 per 100,000 males in developing countries to 18 per 100,000 males in developed countries [3,5]. Haemophilia can be graded into mild, moderate and severe, based on the factor VIII and IX level in the plasma [1,6]. Those with less than 1% factor activity have severe disease, while those with factor activities ranging from 5% to 40% have mild disease [1,6]. Patients with factor activity in between the mild and severe diseases have moderate disease. Severity of the disease determines the bleeding pattern and the complications of the disease. It was recently reported that about 50% of Haemophiliacs in Nigeria have severe disease [5].

Management of haemophilia is evolving, in recent times, the introduction of prophylactic schemes in 1970s, to plasma transfusions in 1980s and 1990s and Recombinant factor VIII replacement in more recent times has decreased the risk of blood borne infections and also with improvement life expectancies [7,8]. Currently, economic considerations of long-term replacement therapies are the main concerns for haemophilia care, most especially in the developing countries. [9]

In the developed countries, Haemophilia care is currently being undertaken at comprehensive haemophilia treatment centres under a Multidisciplinary team [1,9]. This team comprises at its core: a haematologist, nurse, physiotherapist, laboratory specialist, social worker and/or psychologist. The broader comprehensive care team includes specialists with experience in working with PWH, including orthopaedic surgeon, plastic surgeon, and general surgeon, a physiotherapist anaesthetist, dentist and pharmacist, hence the role of physicians cannot be over emphasized in the care of Haemophilia [9-12]. The objective of this study was to determine the extent of haemophilia care in South West of Nigeria, as part of a nationwide haemophilia care survey in Nigeria and also determine the type of haemostatic support given to haemophilic patients.

2. METHODS

2.1 Study Design and Setting

The extent of haemophilia care in the South Western part of Nigeria was analyzed using a

cross-sectional study design. Physicians in the south western part of the country were contacted as part of a nationwide survey in 2016. This survey was carried out to identify the level of care given to Haemophilic patients in health care facilities in the South West, Nigeria.

The South Western part of the country is referred to as the Yoruba speaking part of the country, they were formerly referred to as the Western region before they were separated into six different states including Oyo, Lagos, Ogun, Osun, Ekiti and Ondo states. Ibadan the capital of Oyo State is adjudged as the largest town in West Africa with a population of over 20,000,000. South western part of Nigeria has the highest number of medical doctors in the country (per 100,000 people). Oyo state has the largest surface area (28, 454 km2) in the south west, Nigeria, about the size of three other states in the same region (Lagos, Ekiti and Osun). [13,14]

2.2 Study Population and Sample Size

Hospitals in both government and private settings were contacted to be part of the study. The hospitals include teaching hospitals, federal medical centres and other secondary health care facilities were involved in the study. The study participants were selected using a combination of Probability and Non-probability sampling techniques. Simple random technique was used to select four out of six south western states-Oyo, Ogun, Ekiti and Lagos states.Hospitals were stratified into Teaching, Federal Medical centre, General Hospital and Private hospital. Purposive sampling technique was employed in selecting all the Teaching and Federal medical centres and random sampling technique was used to select the private and general hospitals. As many respondents that consented to the study constituted the study population.

2.3 Data Collection

Physicians in the south west region were contacted physically and through electronic medium to assess their experience on the Haemophilia care in Nigeria. Self-administered questionnaires were used to obtain data. The questionnaire comprised three sections; sociodemographic (age, gender, place of practice, type of health care facility of practice), qualifications and years of experience, Haemostatic support in Haemophilia (use of FFP, Cryoprecipitate, Factors VIII and IX). The researchers designed the questionnaire based on themes identified during extensive review of literature. The face and content validity were achieved using kappa agreement for test-retest [coefficient 0.7]. To ensure consistency, the questionnaire was designed and printed in the English language which is the lingua franca of the country.

2.4 Data Analysis

Data were analyzed using the statistical package for social science (SPSS) IBM version 23. Continuous variables were summarized as means and standard deviation, and bivariate analysis was performed using the Independent sample *t*-test. Categorical variables were summarized as percentages and multivariable analysis was either by Pearson Chi-square Fisher's Exact Test where applicable. All tests were two-sided, and statistical significance was considered to be at a probability value of $p < 0.05$.

3. RESULT

The self-administered questionnaires were retrieved from 215 physicians out of 500, giving a response of 43%. Most of the respondents, about 80% are from Oyo state while Lagos has the least number of respondents. The distribution of respondents as per state of practice is shown in Fig. 1. Also, about two-thirds of the respondents work in a teaching hospital, this is followed by respondents in private facilities. Fig. 2. shows the distribution of the respondents as regards the type of health facility where they work. Fig. 3. below shows the highest qualifications of respondents. Most (55%) of the respondents have Bachelor of Medicine, Bachelor of Surgery (MBBS) as the highest qualification. Fig. 4. depicts the number of physicians who have never managed haemophiliacs. All the respondents from the Federal Medical centres have never managed Haemophilia, while about half of the respondents in the Teaching Hospitals has also not managed Haemophilic patients.

Fig. 5. and Fig. 6. shows the types of blood products employed in the treatment of either Haemophilia A or B respectively. Most of the respondents indicated that Fresh Frozen Plasma and Fresh whole blood can be used to manage patients with both Haemophila A and B. Some surprisingly stated that Factor replacement cannot be used in the treatment of Haemophilia.

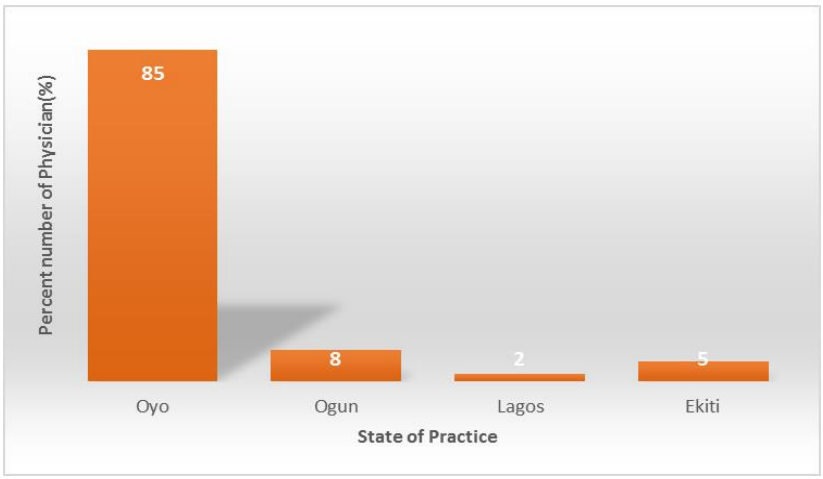

Fig. 1. Physicians' location of the state where they practice

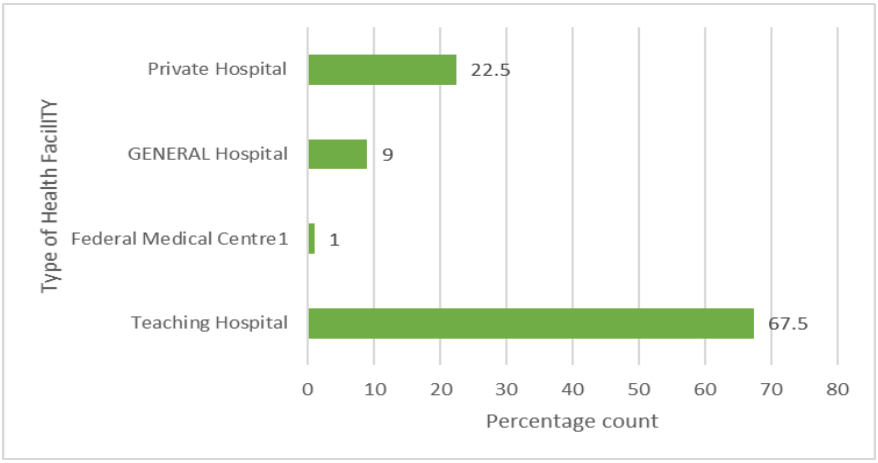

Fig. 2. Physicians response to the type of health facility where they practice

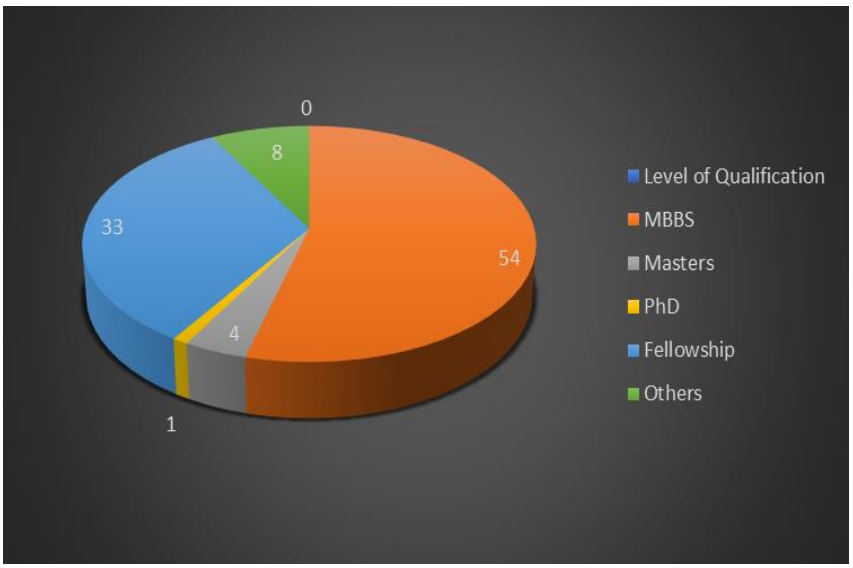

Fig. 3. Physicians level of highest qualification

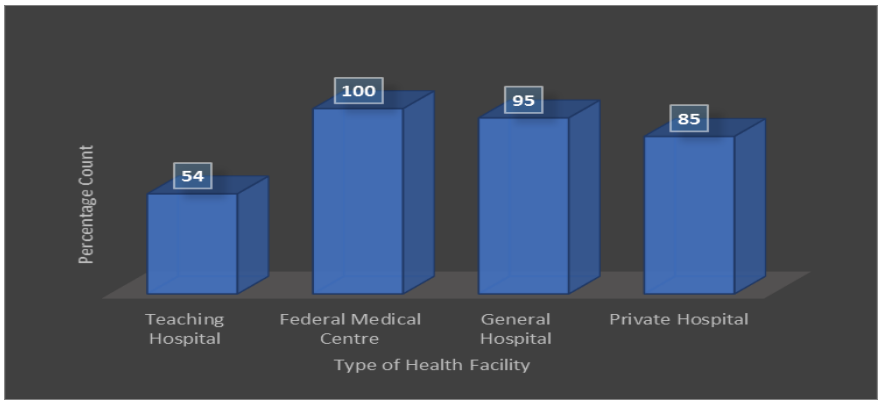

Fig. 4. Physicians who have never managed a Haemophiliac in different hospital facilities

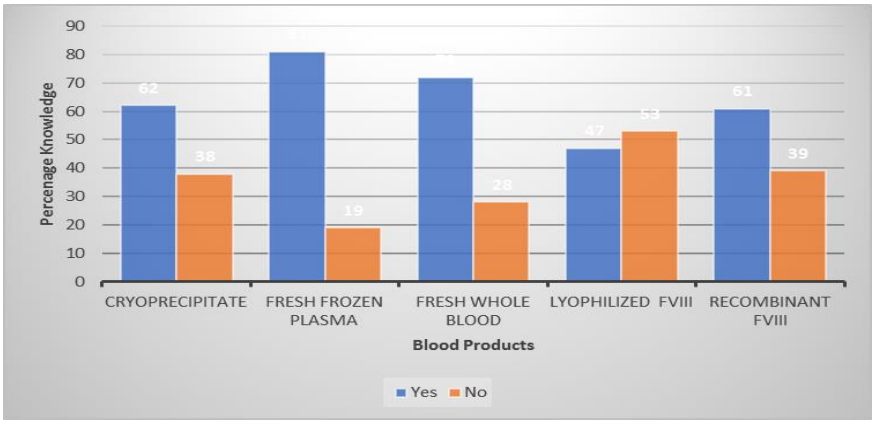

Fig. 5. Types of blood products employed by physicians in the treatment of Haemophilia A

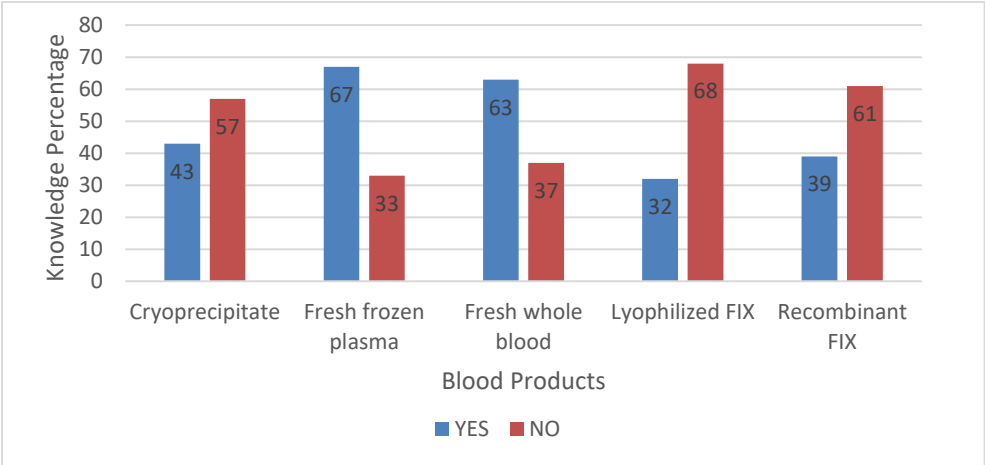

Fig. 6. Types of blood products employed by physicians in the treatment of Haemophilia B

4. DISCUSSION

This study aimed at determining the extent of haemophilia care and the type of haemostatic support given to haemophilic patients in the South Western part of Nigeria. Most of the respondents involved in this study were from Oyo state, this is mainly due to the location of the study, which is in Ibadan.

About two-thirds of the respondents work in teaching hospitals, the location of the study was in Ibadan, the Oyo state capital. The state has two functional government owned teaching

hospitals, University College Hospital in Ibadan and Lautech Teaching Hospital, Ogbomoso. This is responsible for the increased number of respondents from the teaching hospitals. Also, the state currently has no federal medical centre. Management of Haemophilia is however not meant to be in the teaching hospitals as World Federation of Haematology now recommends home care for some of the patient [3]. There is need to spread the care of Haemophila outside the teaching hospital.

About half of the respondents had MBBS as their highest qualification, being doctors in Residency training at that time. This is one of the mandates of a teaching hospital, part of the training also includes care of benign and malignant haematologic cases like Haemophilia. The respondents had MBBS as the highest qualification and they are being trained under supervision and this is the best to inculcate the multidisciplinary approach to management of Haemophilia.

All the respondents from Federal Medical Centres (FMC) and most Physicians from the private hospitals have never managed case with Haemophilia. Haemophilia is a rare bleeding disorder and this may be responsible for their lack of experience in the management of Haemophilia[1,4]. Also, most health care facilities do not run a separate haemophilia clinic as this is the goal standard currently [3,4], hence the experience of the average doctor in Nigeria in the management of Haemophilia is inadequate.

Most of the respondents believe Fresh Frozen Plasma and Fresh whole blood can be used as haemostatic supports in the management of Haemophilia. This is a reflection of inadequate knowledge about the pathophysiology of the bleeding disorder and need for further training on haemophilia care. In some centres (e.g. UCH, Ibadan and LUTH, in Lagos), Recombinant factor VIII replacement is given to a few patients but there is need to improve on this and develop the multidisciplinary approach to the care of Haemophilia in these centres.

5. CONCLUSION

The care of haemophiliacs in the south western part of Nigeria needs to be improved upon and standardized, the study showed that most physicians have no contact with Haemophiliacs and not aware of the right products in the treatment of the disease. Limitation of the study is the low response rate of target population; most response is from Oyo state limiting the generalization of the study. Area of future research will be to have more representative samples and quantification of the knowledge of the physicians about Haemophilia care.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Ethics review committee of the University College hospital/ College of Medicine, University of Ibadan approved the study (UI/EC/). The study participants were informed about the purpose of the study and they were assured of the confidentiality of the data obtained which were stored in a password-protected computer that was only accessible to the researchers.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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