



Attitude and Perceptions of Child Healthcare Practitioners in Nigeria to Autopsy Practice

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

Editor(s):

(1) Erich Cosmi, University of Padua, Italy.

Reviewers:

(1) Paola Vellante, Universit'a degli Studi "G. d'Annunzio", Italy.

(2) Benjamin D. Nuertey, University of Ghana, Ghana.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/55224>

Original Research Article

Received 01 January 2020

Accepted 07 March 2020

Published 16 March 2020

ABSTRACT

Introduction and Objectives: There has been a gradual decline in interest in postmortem audit worldwide despite the enormous potential value of the autopsies. In many paediatric centres across Nigeria, there is no policy providing the use of autopsy statistics in the main business of paediatric practice or as a means of assessing a centres' performance. Even where such a policy exists, there is no compelling law for the incorporation of the statistics into daily paediatric practice. This study set out to survey the attitude and perception of child healthcare practitioners in Nigeria towards post-mortem examination in improving patients care.

Materials and Methods: A cross-sectional descriptive study was done on participants attending a paediatric conference in Abuja, Nigeria. There were 250 respondents, who cut across the six geopolitical zones of Nigeria, consisting of paediatric consultants, residents and nurses. The study was done using self-administered questionnaires and data analysed using SPSS version 20.

Results: All (100%) participants believed autopsy practice was valuable and had a positive effect on medical practice. Sixteen (6.4%) respondents never request for autopsies, 120 (48.0%) respondents request for it rarely, 34 (13.6%) make a request often while 10 (4%) request for autopsies very often. Eighty-four (33.6%) respondents have never attended an autopsy session. The interval between autopsies and issuance of reports ranges from 0-3 weeks (48.0%) to > 6 weeks (8.8%). The usual indications for requesting for autopsies include knowing the cause of death (85%), inability to arrive at a clinical diagnosis antemortem (71.2%) and improving clinical diagnosis skill and patient care (60.0%).

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Conclusion: Autopsy practice is useful in paediatric practice but it is rarely requested for and infrequently attended by the child healthcare practitioner. There is a need to change the attitude and perception of all healthcare workers in paediatric practice through proper orientation and education.

Keywords: Child healthcare worker; Nigeria; autopsy.

1. BACKGROUND

The word 'autopsy' takes its origin from the Greek words 'autos' and 'opsomeri', meaning 'to see for one's self' [1]. The practice dates back to 3000 BC in ancient Greece, where Hierophilus did a live dissection of a human being, discovering the duodenum [1,2]. An autopsy is a post mortem examination to discover the cause of death or the extent of disease [3]. It is a thorough clinic-pathologic (macroscopic and sometimes microscopic) examination of the deceased body by a physician in order and not just to primarily find the cause of death but also to evaluate the pathologies of the events that lead to death [4]. The autopsy should ideally be supplemented by clinical information on the patient's medical history, the presumed cause of death and clinical issues [4].

There has been a gradual decline in interest in postmortem audit worldwide despite the enormous potential value of the autopsies [3,5]. In many paediatric centres across Nigeria, there is no policy ensuring the use of autopsy statistics in paediatric practice or as a means of assessing a centres' performance. Even where such a policy exists, there is no compelling law for the incorporation of the statistics into daily paediatric practice. Autopsy requests are then left to the perceived need of the attending physician in the presence of a co-operative patient relative who willingly gives consent. In other cases, autopsy requests are based on the requests made by legal personnel in the event of a criminal case or questionable death reported to them. Outside these, most other cases are swept under the carpet and many avenues for learning missed. This was not the case in the 1970-1980s as autopsies were regarded as the final procedure before a patients' record was closed [6]. In Ibadan Nigeria, autopsies following childhood mortality fell from 60% of cases in 1961 to 3.6% in 2003 [7-9]. In a retrospective study by Nduagubam et al. [10] in Enugu in 2018, the autopsy rate in the paediatric department was as low as 0.4%. Even in the United Kingdom, the mean autopsy rates in the year 2013 were 0.69% [11].

What really is responsible for this drastic drop in autopsy rates? A major culprit may be the 'blessing' of the development and use of sophisticated medical diagnostic technology and instruments that leave nothing to be uncovered during an autopsy session [6]. Clinicians then tend to believe that the cause of death is known and so a post-mortem examination is not necessary [12]. Researchers, however, have shown that even with the use of top-notch diagnostic facilities, there is still a discrepancy between clinical and anatomical findings, hence the need for autopsies [6,13-15]. Other contributors may be the scarcity of trained anatomical pathologists or absence of autopsy facility in hospitals, especially in a developing country like Nigeria or the difficulty in obtaining consent from the relatives of the deceased [16]. While the aforementioned reasons may hold true, the attitude and perception of clinicians towards autopsy practise have an albeit central role to play in this observed decline. This study, therefore, set out to survey and document the attitude and perception of child healthcare practitioners in Nigeria towards post-mortem examination. The information obtained from this study will guide the planning of health intervention programmes aimed at reviving the autopsy culture in today's clinical practice.

2. MATERIALS AND METHODS

2.1 Study Site

The study was conducted during a 3-day conference of the Paediatric Association of Nigeria (PAN Conf, 2018) in Abuja, Nigeria. Such sampling ensured the inclusion of participants from all the 6 geopolitical zones of Nigeria. The PAN Conf is the largest gathering of paediatricians in Nigeria. This yearly conference takes place in January at different locations in the country and serves as an avenue for deliberations, promotion of knowledge and exchange of information on child health matters. It is organized by the Paediatric Association of Nigeria (PAN).

2.2 Study Population

There were over 750 registered participants at the PAN Conf Abuja, 2018 of which about 500 persons were doctors or nurses. Only doctors and nurses involved in the care of children within a hospital setting were included in this study. Invitees and other guests at the conference who did not fit into these criteria as well as those who withheld their consent were excluded.

2.3 Study Design

This was a cross-sectional descriptive study on participants of the PAN, Abuja conference. The participants were given background information on the aim and objectives of the study. They were also told that participation was by choice and non-participation attracted no negative consequences. A self-administered semi-structured questionnaire prepared by the researcher to derive socio-demographic data and information concerning the subject matter. Relevant information such as age, gender, the region of practice in Nigeria, the number of years of practice and designation was obtained. Data was collected on the indications for autopsies, the number of autopsies requested for and/or attended, and the relevance of autopsy practise.

The operational definitions for the terms used in the 4 point likert scale of two questions in the questionnaire are:

Never – has not happened at all.

Rarely- in less than 20 percent of cases where it is otherwise indicated.

Often- in 20 to 50 percent of cases where it is otherwise indicated.

Very Often- in 50 percent of cases where it is otherwise indicated.

The questionnaire was pretested for accuracy, analysability, and acceptability. The pretest was done among 20 paediatricians (doctors and nurses) attending a departmental seminar at the University of Port Harcourt Teaching Hospital. Ambiguous questions identified were corrected. The questionnaire had 15 questions, both closed and open-ended questions.

The questionnaires were distributed mainly at the beginning of the symposium sessions when all conference attendees are to be seated in the same hall for 45 minutes to 1 hour.

Questionnaires were distributed to every 3rd participant sitting in a row, after applying the selection criteria (systematic sampling).

2.4 Data Analysis

Completed questionnaires were collected, screened for accuracy and completeness, and analysed using SPSS v 20 (SPSS Inc., Chicago, Illinois, USA). Simple descriptive statistics (i.e. proportions, ratios and percentages) was done and presented in tables.

3. RESULTS

A total of 300 questionnaires were distributed. 250 questionnaires were retrieved that were completely and correctly filled, giving a response rate of 83%. Of these 250 respondents, there were 84 Males and 166 females with an M: F ratio of 1:2. The largest age group represented was the 40-49 years age group (44.8%). 142 (56.8%) of respondents were Consultants. Eighty percent of respondents practised in tertiary health care facilities (Table 1).

All (100%) participants believed autopsy practice was valuable and had a positive effect on medical practice. Sixteen (6.4%) respondents never request for autopsies, 120 (48.0%) respondents request for it rarely, 34 (13.6%) make a request often while 10 (4%) request for autopsies very often. Eighty-four (33.6%) respondents have never attended an autopsy session while 130 (52%) of respondents rarely attend autopsy sessions. The interval between autopsies and issuance of reports ranges from 0-3 weeks (48.0%) to > 6 weeks (8.8%) (Table 2).

The usual indications for requesting for autopsies include knowing the cause of death (85%), inability to arrive at a clinical diagnosis antemortem (71.2%) and improving clinical diagnosis skill and patient care (60.0%) (Table 3).

4. DISCUSSION

In this study, all respondents believed autopsy practise was valuable and have positive effects in their clinical practice. This is similar to the observations of Stolman et al. [3] where 98% of respondents believed autopsy provides valuable information. Also, 80% of study participants in the report of Maeda et al in Tokyo (Japan), acknowledged the usefulness of autopsies [13]. Though all respondents in this present study

Table 1. Sociodemographic characteristics of the respondents

| Variable | Frequency(n=250) | Percent |
|--|-------------------------|----------------|
| Age group | | |
| 20-29 | 0 | 0.0 |
| 30-39 | 100 | 40.0 |
| 40-49 | 112 | 44.8 |
| 50-59 | 32 | 12.8 |
| 60-69 | 6 | 2.4 |
| >70 | 0 | 0.0 |
| Gender | | |
| Male | 84 | 33.6 |
| Female | 166 | 66.4 |
| Years of medical practice post-graduation | | |
| 1-4 | 2 | 0.8 |
| 5-9 | 46 | 18.4 |
| 10-14 | 82 | 32.8 |
| 15-19 | 54 | 21.6 |
| 20 and above | 58 | 23.2 |
| NR* | 8 | 3.2 |
| Designation | | |
| Consultant | 142 | 56.8 |
| Senior Registrar | 78 | 31.2 |
| Registrar | 6 | 2.4 |
| Medical Officer | 6 | 2.4 |
| Paediatric nurse | 18 | 7.2 |
| Region of practice in Nigeria | | |
| South-South | 90 | 36.0 |
| South-East | 24 | 9.6 |
| South-West | 28 | 11.2 |
| North-Central | 78 | 31.2 |
| North-East | 22 | 8.8 |
| North-West | 8 | 3.2 |
| Type of health facility of practice | | |
| Tertiary facility | 202 | 80.0 |
| Secondary facility | 30 | 12.0 |
| Primary facility | 12 | 4.8 |
| Private | 4 | 1.6 |
| NR* | 2 | 0.8 |

NR* - No response

agreed that autopsies are useful in clinical practice, only 4% of them requests for autopsies very often. As much as 48% of the respondents rarely make autopsy requests and even fewer attend the autopsy sessions. The question then is, 'Why are there still few autopsy requests and very poor attendance of autopsy sessions by clinicians?'

First and foremost, it is right to think that the availability of autopsy services at a particular health facility will encourage paediatricians to make autopsy requests and show interest in participating in the autopsy sessions. The health facility, in order to successfully carry out autopsy

sessions, must possess an equipped anatomical pathology laboratory, a morgue and skilled personnel duly trained and certified in autopsies. Autopsy facilities were available in the hospitals where 84.8% of the respondents in this present study practise. This finding is probably due to the fact that most of the respondents in this study work in tertiary health facilities. However, the extent to which these centres are satisfactorily equipped was not explored in this study.

In this present study, only 12% of the respondents often attend autopsy sessions of patients they managed. This is remarkably low, bearing in mind that these respondents work in

Table 2. Attitude and perception of the respondents to autopsy practice

| Variable | Frequency (n=125) | Percent |
|---|-------------------|---------|
| Are autopsy reports valuable to medical practice? | | |
| Yes | 250 | 100.0 |
| No | 0 | 0.0 |
| Will autopsy reports have a positive effect on your practice? | | |
| Yes | 250 | 100.0 |
| No | 0 | 0.0 |
| Are autopsy services available at your place of practice? | | |
| Yes | 212 | 84.8 |
| No | 38 | 15.2 |
| How frequently do you request for an autopsy? | | |
| Never | 16 | 6.4 |
| Rarely | 120 | 48.0 |
| Often | 104 | 41.6 |
| Very often | 10 | 4.0 |
| How frequently do you attend autopsy sessions of patients you managed? | | |
| Never | 84 | 33.6 |
| Rarely | 130 | 52.0 |
| Often | 30 | 12.0 |
| Very often | 4 | 1.6 |
| NR* | 2 | 0.8 |
| What has been the interval between the request for an autopsy and the issuance of an autopsy report? | | |
| 0-3weeks | 120 | 48.0 |
| 4-6weeks | 94 | 37.6 |
| >6weeks | 22 | 8.8 |
| NR* | 14 | 5.6 |

NR* - No response

Table 3. Indications for autopsy requested for

| Autopsy indications | Responses | | Percent of cases (N=240) |
|--|-----------|---------|--------------------------|
| | N | Percent | |
| Medico-legal reasons | 86 | 12.7 | 35.8 |
| Inability to arrive at a clinical diagnosis antemortem | 172 | 25.5 | 71.2 |
| Improving clinical diagnosis skill and patients care | 144 | 21.4 | 60.0 |
| To know the cause of death | 204 | 30.3 | 85.0 |
| For case presentation at morbidity-mortality meetings | 66 | 9.8 | 27.5 |
| Family request | 2 | 0.3 | 0.8 |

tertiary health facilities which are often supposed to be training institutions for medical students, doctors and nurses. With poor attendance of autopsy sessions, a significant chunk of learning is missing as the trainee doctors are unable to completely appreciate the practical aspects of the teachings. Furthermore, the vicious cycle sets in, as medical students or residents with little or no exposure to autopsies, do not appreciate its usefulness and in future, become doctors who scarcely make autopsy requests or teach their students about autopsy use in clinical practice [3]. Autopsies should be regarded as the 'final consultation' of a patient after which all

matters concerning the case should be closed. This low turn up of paediatricians at autopsy session is similar to the report of Yawson et al. [17] where a majority of clinicians, 88 (73.9%) had not attended any autopsy demonstrations in the past 6 months, however, almost all clinicians 111 (93.3%) attended monthly mortality or clinic-pathological meeting in their department/unit where autopsy reports discussed. Another fall out of poor exposure of students and young doctors to autopsy practical sessions is that only a few of them develop an interest in specializing in anatomical pathology. It is also believed that the clinical specialities are more financially

rewarding and lucrative than the laboratory-based specialities [4,18]. As a result of this, there is an overall paucity of trained anatomical pathologists in the country to meet the demand for autopsies. Another likely reason for the poor attendance at autopsy sessions in this present study may be due to the inclusion of nurses in the study population. The training of nurses scarcely includes teachings on morbid anatomy.

Furthermore, the duration from request for an autopsy to when the autopsy results are available has a significant effect on the frequency of request by the clinician. Clinicians are often discouraged when waiting for a result runs into several weeks or even months [6]. Delay creates a gap in learning as the information gained from an autopsy needs to be immediately related with the clinical diagnosis and management of a patient while the memory of the patient remains fresh in the minds of the attending clinicians. One hundred and twenty (48%) of respondents in this study receive their autopsy within 3 weeks of the autopsy session. This is the recommended ideal proposed by a joint working party of the Royal College of Pathologists, Royal College of Physicians of London, and the Royal College of Surgeons of England. Clinicians should receive a summary of the significant findings following an autopsy as soon as possible, preferably within 48 hours, and the final complete report should be issued within 3 weeks of the autopsy [5]. Conversely, Yawson et al. [17] reported that more than a third of clinicians 43 (36.2%), received full autopsy report beyond three weeks and 75 (63.1%) clinicians had concerns with the validity of reports issued by the autopsy service.

Lastly, the top three indications for the autopsies requested for by the respondents in this study were to know the cause of death, inability to arrive at a clinical diagnosis ante mortem and to improve clinical diagnostic skill and patient care. The least common reasons given for making autopsy requests were family requests, medico-legal reasons and for morbidity/mortality reviews. This is similar to the report in a study conducted among medical doctors in a teaching hospital in Ghana where the top two reasons for requesting autopsies were to answer clinical questions, 55 (46.2%) and in cases of uncertain diagnosis, 54 (45.4%) [17]. A possible reason for this similarity could be that both studies were carried out among clinicians (majorly doctors) working in teaching hospitals who handle similar challenging medical cases and are at the end-point of the patient referral system.

From the foregoing, it is clear that paediatricians push for an autopsy to be done mainly when the patient diagnosis is in doubt. Therefore, in addition to this indication for autopsy, a major means of increasing the number of autopsies done in health facilities in Nigeria will be to implement mandatory autopsies for medico-legal concerns. A limitation of this study was its narrow scope as it did not explore the reasons for poor utilization of autopsy services by the paediatricians who worked in hospitals where autopsy services are available. This would have provided insight into the key areas or gaps that need to be addressed to curb the decline in the use of autopsies. Furthermore, this study being done on conference attendees only may bias the findings as these participants may consist of more knowledgeable, eager-to-learn paediatricians. The results therefore may not be truly representative of the overall perceptions of paediatricians in Nigeria.

5. CONCLUSION AND RECOMMENDATION

Autopsy practise is useful in paediatric practice but it is rarely requested for and infrequently attended by the child healthcare practitioner. If the autopsy rate is to improve, physicians in training will require increased exposure to autopsies, education regarding the potential benefits and enhancement of interpersonal skills for successful communication with families in crisis. There is a need to change the attitude and perception of all healthcare workers in paediatric practice through proper orientation and education.

CONSENT AND ETHICAL APPROVAL

Distributed with the questionnaire was a participant information sheet detailing the nature of the research, and the research objectives, assuring participants that their anonymity would be protected and that responses would be treated with the utmost confidentiality and used only for the purposes of this project. Return of the completed questionnaire was taken as informed consent. Permission to collect the data was also granted by the local organizing committee of the PAN Conf.

ACKNOWLEDGEMENT

The author is grateful to all the paediatricians who participated in the study and for the support received by ushering staff and members of the

local organizing committee, PAN Conf., Abuja, 2018.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:

The peer review history for this paper can be accessed here:
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