Care of the “unknown patient” in a Nigerian tertiary hospital setting

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ABSTRACT

Aims: The aim of this study is to determine the prevalence of unknown patients who presented to our facility within a five-year period and to review our care of such patients, with a view for establishing a database that will form the basis for improved care plan.

Methods: We performed a retrospective chart review of all “unknown patients” at the Accident and Surgical Emergency Room (ER) at Alex Ekwueme University Teaching Hospital from January 2015 to December 2019. Data collected included socio-demographics, cause of trauma, type of injury sustained, Revised Trauma Score (RTS), challenges in management, and outcome of treatment. The data was analyzed with SPSS version 20 and discussed.

Results: A total of 15,542 patients presented to the Accident and Surgical Emergency Department of the hospital within the study period, out of which 91 (0.6%) were labeled “unknown patients.” Of these 91 unknown patients, 41 were brought in dead (BID), and 50 were live patients who were admitted to ER and treated. Of the 50 live patients, 38 (76%) were males giving a male to female ratio of 3.2:1. All were secondary to trauma. Majority, 44 (88%) were due to road traffic accident (RTA), while 6 (12%) were due to assault. The type of trauma was predominantly head injury.

Conclusion: The care of the “unknown patients” in our setting is fraught with logistic difficulties. Trauma in association with head injury was the common reason for most admissions. Measures to curb RTAs will go a long way to reduce the incidence.

Keywords: Head injury, Nigeria, Surgical emergency room, Unknown patients

INTRODUCTION

The “unknown patient” is a patient whose identity cannot be ascertained at the time of arrival to the hospital. Little or nothing is known about their personal or family details at the first point of contact with the emergency care team. It may be that the patient is unable or unwilling to give his or her identity. Unconscious or critically ill patients, as well as intoxicated (from alcohol or drugs), confused or agitated patients are often unable to give their identity [1]. For the purposes of identification, these patients can be christened John Doe (for males) and Mary or Jane Doe (for females). These names which are also used in legal and forensic circles for the “unknown persons,” were first adopted following a legal debate in England during the time of King Edward III (1312–1377) [2].
The arrival of an unknown patient at the ER causes a lot of consternation. Their care is most challenging, and poses moral, medical, and legal issues, especially in developing countries with limited resources. These challenges may result in worse prognosis among unknown patients [3, 4]. There are no obvious landmark events showing progress on the subject of “care of the unknown patients” particularly, perhaps from lack of adequate interest by anybody. The parable of the Good Samaritan in the Bible (Luke 10: 30–37) is perhaps the most prominent historical “Care of the Unknown” in literature [5]. The story highlights our individual moral obligations to such patients.

The Nigerian National Health Act [6] obligates all health establishments not to refuse a person to get emergency medical treatment for any reason. The policy of our hospital is to treat all emergency patients with or without payment within the first 48 hours of arrival to the hospital. This includes unknown patients. However, there is virtually no published data about “unknown patients” in our setting. The purpose of this study is to determine the prevalence of unknown patients in our setting, and to review our care of such patients, with a view to improving upon it.

MATERIALS AND METHODS

This is a retrospective study conducted at the Accident and Surgical Emergency of Alex Ekwueme Federal University Teaching Hospital, Abakaliki (AEFUTHA), South East Nigeria. The hospital is a 500 bed tertiary institution that serves the entire Ebonyi State and nearby communities in neighboring States of Benue, Cross River, Abia, and Enugu.

We did a review of our records over a five year period from January 2015 to December 2019. During this period, emergency clinical services were available for 24 hours and 7 days a week, with on duty general medical officers and nurses, while all surgical sub-specialist teams were available on call basis. Laboratory and imaging services as well as theatre were also operational for 24 hours and 7 days a week.

All case files labeled “unknown patient” over the period were retrieved. Data collected includes demographics, cause of injury, type of injury, initial Glasgow Coma Score (GCS), blood pressure, and respiratory rate, as well as investigation results, treatment given, challenges, and outcome of treatment. The RTS was calculated from the initial GCS, systolic blood pressure, and respiratory rate.

RESULTS

A total of 15,542 new patients were seen over the study period. The total number of unknown patients over the period was 91, accounting for 0.6% of all patients.

Distribution of “unknown patients” by year:

Table 1 shows the number of unknown patients seen from January 2015 to December 2019. Fifty (55%) were brought in alive while 41 were BID. Pointing to a rising trend, 2019 recorded the highest number.

Who and how brought to hospital:

Forty-six (92%) of the live unknown patients were brought to the hospital by Road Safety Corps or the Police in open pickup vans. Four were brought in by good-spirited individuals in tricycles. None of the patients had any form of resuscitation before arrival to hospital, except bandaging of bleeding areas.

All but one of the BIDs was brought to the hospital by Road Safety Corps or the Police in an open pickup van. One was brought by a security operative in his personal car.

Gender and trauma characteristics of the live unknown patients:

Live unknown patients were predominantly males 38 (76%); females were 12 (24%), giving male to female ratio of 3.2:1 (Table 2). The major cause of trauma was road traffic accident (RTA), accounting for 44 (88%), followed by assault 6 (12%). Most had head injury 36 (72%), limb fractures 10 (20%). The Revised Trauma Score (RTS) was calculated from the Glasgow Coma Score, systolic blood pressure, and respiratory rate (Table 3). The median RTS was 10, with five patients scoring 4 and below (Table 4). One patient who was fully conscious was unwilling to give his identity for security reasons.

Treatment received:

All 50 live unknown patients had injuries and received anti-tetanus prophylaxis. Three children with minor bruises received wound dressing, analgesics, and antibiotics, before discharged to their parents who later showed up. Forty seven (94%) patients who were unconscious or critically ill were resuscitated with intravenous fluid, analgesics, and antibiotics. Twenty-six patients (52%) required oxygen therapy. Twenty-one (42%) received blood transfusion. Nine patients (18%) had reduction and fixation of fractures.

One had below knee amputation for a mangled limb. Seven patients (14%) had craniotomy with evacuation of extradural hematoma.

| Year | Live unknown patients | BID unknown patients | Total |
|------|-----------------------|----------------------|-------|
| 2015 | 4                     | 13                   | 17    |
| 2016 | 11                    | 9                    | 20    |
| 2017 | 10                    | 5                    | 15    |
| 2018 | 8                     | 6                    | 14    |
| 2019 | 17                    | 8                    | 25    |
| Total| 50                    | 41                   | 91    |

BID: brought in dead.
Outcome of treatment and analysis of “unknown patients” who demised in hospital: Of the 50 “unknown patients” who arrived at the ER alive, 45 (90%), were successfully resuscitated and treated. Five died during the course of resuscitation, with a mortality rate of 10%. Of the five who demised, 4 (80%) were males; all (n = 5, 100%) sustained trauma from RTA. All (n = 5, 100%) sustained severe head injury (Table 5), with RTS of 4 and below.

• Protocol of care: The records show regular activities in our protocol of care of the “unknown patients,” which include: (1) Documentation: Folders were opened and labeled “unknown patient.” Information as to where the patient was picked up and the vehicles involved in the case of RTA were documented. (2) Resuscitation: The immediate medical needs were billed to folder, and effort at resuscitation proceeds as for every other patients.

(3) Identity search: The patients were searched for any identification-ID cards (work place ID, driver’s license, national ID) or phone with contacts. (4) Hospital public relation officer (PRO) was routinely contacted for help. The PRO contacted the police who might have useful information. The PRO also contacted the Radio or Television Station manager if needed. The station did the announcements as part of its cooperate social responsibility. (4) Social welfare unit was routinely informed as well. They approached management for exemptions as well as philanthropists for donations.

Identification status on discharge: Forty-three (86%) of the unknown patients were identified and united with their families before discharge. However, time of identification was not specified in their records. Five (10%) demised before identification. One patient was deliberately anonymous for security reasons, apparently afraid of reprisal attack by unknown assailants. He left on his accord when he was discharged from hospital. One other unidentified unknown patient was given transport fair when he became sure of his name and place of abode, after six months stay in the hospital.

Gender and trauma characteristics of the BID unknown patients: Males outnumbered females by 4 to 1. Road traffic accident was the predominant cause of trauma in our unknown BID (88%), followed by assault (7.3%). One died of electrocution when interfering with the cable of electricity supply 1 (2.4%). The cause of death in one BID was unknown (Table 6). Family details and socio-economic status such as level of education and work place could not be found.

The hospital protocol of care of unknown BIDs

Table 2: Characteristics of live “unknown patients” (n = 50)

| Variable                  | n = 50, n (%) |  
|---------------------------|--------------|
| Gender                    |              |
| Male                      | 38 (76%)     |
| Female                    | 12 (24%)     |
| Cause                     |              |
| RTA                       | 44 (88%)     |
| Assault                   | 6 (12%)      |
| Type of injury            |              |
| Head injury               | 36 (72%)     |
| Multiple injuries with limb fractures | 10 (20%) |
| Soft tissue injuries only | 3 (6%)       |
| Blunt chest trauma        | 1 (2%)       |
| Outcome of treatment in ER|              |
| Treated and discharged/transferred to ward | 45 (90%) |
| Mortality                 | 5 (10%)      |

Table 3: Revised trauma score application [7]

| Revised trauma score | Number of patients (%) | Mortality | Mortality rate per RTS group |
|----------------------|------------------------|-----------|-----------------------------|
| 12                   | 4 (8%)                 | 0         | 0%                          |
| 11                   | 11 (22)                | 0         | 0%                          |
| 10                   | 17 (34)                | 0         | 0%                          |
| 9                    | 13 (26)                | 0         | 0%                          |
| 4                    | 2 (4)                  | 2         | 100%                        |
| 2                    | 3 (6)                  | 3         | 100%                        |

Table 4: Revised trauma score (RTS) of “unknown patients” (n = 50)

Survival rates for RTS values: 12 = 99%; 10 = 88%; 6 = 63%; 5 = 46%; 2 = 29%; 0 = 3%.

Table 5: Analysis of “unknown patients” who demised in hospital

| Variables                  | n = 5, n (%) |  
|----------------------------|--------------|
| Gender                     |              |
| Male                       | 4 (80%)      |
| Female                     | 1 (20%)      |
| Cause of trauma            |              |
| RTA                        | 5 (100%)     |
| Type of injury             |              |
| Head injury                | 5 (100%)     |

Table 6: Analysis of “unknown patients” brought-in-dead (n = 41)

| Variable                  | n = 41, n (%) |
|----------------------------|---------------|
| Gender                     |               |
| Male                       | 33 (80.5%)    |
| Female                     | 8 (19.5%)     |
| Cause of trauma            |               |
| RTA                        | 36 (88%)      |
| Assault                    | 3 (7.3%)      |
| Electrocution              | 1 (2.4%)      |
| Unknown                    | 1 (2.4%)      |

RTA: road traffic accident.
included documentation of who brought the body (including name, office, and mobile phone number), state of the body (including obvious major injuries), and preservation of the body in the morgue. This is followed by reporting to the police for record purposes and any needful actions.

DISCUSSION

The majority of our “unknown patients” were males among live patients, as well as the BIDs. It means that men are more on the move, and more at risk of trauma. This is consistent with other studies [4, 8]. This is understandable in our setting where the males are the main breadwinners of their families, and may get traumatized in their daily struggle.

Most of our trauma-related cases of “unknown patients” were secondary to motor vehicular or motor cycle accidents. With steady urbanization, long distance high speed journeys and increasing number of vehicles on our roads, there has been a remarkable upsurge in RTA. Men in the south eastern Nigeria are mostly traders who engage in long distant journeys to obtain or market their goods. This exposes them to accidents. Therefore, primary preventive measures to reduce accidents on our roads will go a long way to reduce incidence of “unknown patients.” Poor road condition is a major contributor to road accidents [9]. Investments in road will therefore reduce the incident of RTA generally. Overloading and overspeeding cause accidents and nobody seems to check that in our community, in spite of the presence of Road Safety Corps. Drunk drivers and phone calls while driving are prohibited. However, this needs to be emphasized more for better adherence.

The patients were most frequently brought to the hospital by the Federal Road Safety Corps or the Police, usually at the back of their pickup vans, without any pre-hospital treatment. Few were brought by good spirited individuals in tricycles. In essence, pre-hospital care is essentially nonexistent in our setting. Pre-hospital care is known to reduce early death [10]. Therefore, tertiary prevention measures such as creation of Community and National Ambulance Network is needful. Jasper et al. [11] in their study showed the mitigating effect of Community Ambulance Network in the Niger Delta region of Nigeria. The Federal Road Safety Corps of Nigeria can fill that role in our setting. They should be trained as paramedics and equipped with functional ambulances, for pre-hospital resuscitation of patients, instead of pick up vans.

The death pattern seen here is explained by the trimodal mortality model following trauma (immediate death, early death, and late death) [12]. The immediate death accounts for the BIDs recorded here, and are a mark of very severe injury to the central nervous and cardiovascular systems. Early death is the second peak in the trimodal distribution and occurs within hours of arrival to the hospital, often due to exsanguinations. While little or nothing can be done to prevent immediate and early deaths, appropriate and timely intervention reduces late death significantly [13]. There was no record of late death among our unknown patients.

The mortality rate among our unknown patients who arrived to hospital alive was 10%. This is similar to figures reported by others [3, 14]. Comparatively, the mortality rate among unknown patients presenting at the ER is observed to be generally higher than for the known patients [15]. This is attributable to the high injury severity score associated with head injury in such patients [4]. The median revised trauma score (RTS) of our unknown patients was 10, with most requiring immediate attention. It is worthy of note that the five (5) patients with the lowest RTS demised. Therefore, low RTS was predictive of mortality among our trauma patients. This is corroborated by other studies [16, 17].

Secondary prevention measures such as enforcement of helmet for motor cycle will reduce head injury following a crash. This is particularly important in our community where motorcycle is a major means of transport, both private and commutes. Victims of motor cycle associated RTA commonly present to our ER with severe head injuries. The usefulness of seat belts while driving also needs to be emphasized, as many commuters only put it on sighting the Road Safety Corps or Police. Majority of our unknown patients (n = 36; 72) sustained head injury, and all who died had severe head injury. The higher mortality rate can, however, also be due to a gap in offering “unknown patients’ timely and appropriate intervention, due to logistic problems usually encountered in the process of their management.

Though few in numbers, the care of the unknown patient presents special challenges in our setting, which includes medical, moral, and legal issues. There was often sparse data on the patients. Information on their ages, cause of accident, pre-morbid condition, and allergy were lacking. Investigations were also limited or delayed. Unknown patients requiring immediate cranial computed tomographic (CT) scan did not get it, as the facility was available outside the hospital on cash before service basis. Problems encountered, therefore, include:

FUNDING: This is a problem since most health care is funded by out of pocket expenditure in our setting. The National Health Act, 2014, Part III, Section 20, No. 1, states that “A health care provider, health worker or health establishment shall not refuse a person emergency medical treatment for any reason” [6]. This is a tall order as emergency medical treatment requires a lot of resources which most health institutions cannot afford. Therefore, government should make special fund available to health institutions to cater for paupers, to include the unknown patients.

MORAL: It is a serious moral challenge for staff of the ER seeing patients in need of treatment but limited somehow. In our setting, we invariably need the relations to perform some role such as run around for their laboratory investigations, go elsewhere to purchase....
The phenomenon of “unknown patient,” though small in number, constitutes a special challenge to the emergency Care Team, and others involved in their management. As the incidence of “unknown patients” continues to rise, there is need to look at it more critically bridge any gap in their care.

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Guarantor of Submission
The corresponding author is the guarantor of submission.

Source of Support
None.

Conflict of Interest
Authors declare no conflict of interest.

Data Availability
All relevant data are within the paper and its Supporting Information files.

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