Journal of Experimental Research

December 2018, Vol 6 No 4

Email: editorinchief.erjournal@gmail.com editorialsecretary.erjournal@gmail.com

Received: *29th July, 2018*

Accepted for Publication: *20th Nov., 2018*

Cases Of Brought In Dead (BID) In The Accident And Emergency Department Of A Tertiary Hospital In Enugu, Nigeria: A Retrospective Study

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Abstract

Health Services in many developing countries like Nigeria are weak and various mortality rates are high. Mortality statistics on BID in Nigeria are few and seem to study mainly trauma relates cases. This study was aimed at assessing the epidemiology of cases of BID in the A & E of a tertiary hospital in Enugu. Retrospective analysis of all cases of BID in a new A & E unit over a 24-month period was done from the hospital records. The results showed that 382 major medical and surgical emergencies out of 8950 patients that presented were seen over the period. There were 88 cases (23.03%) of major emergencies recorded as BID. They were 48 males and 40 females. 19 cases of BID were accident related (21.59% of BID). BID presenting to our A & E is high relative to our major emergencies. We must conduct research to understand this phenomenon more.

Key words: BID, A & E, major emergencies, Enugu Nigeria.

INTRODUCTION

Mortality statistics measure decline in population over a specified period of time. BID forms part of this decline. In general mortality within a given Community can be monitored by periodic analysis of causes of death within the Community or its health institutions (Ekere et al. 2005; Ugare, et al. 2012). Mortality statistics both national and international are valuable for planning of health care services, design of preventive programmes and the consideration of priorities for research. We define major emergencies are those that result in hospitalization or death.

BID or Death on Arrival (DOA) are patients who are brought into the hospital without any registrable heart activity and any other vitals suggesting life as verified by the attending physician (Sudnow, 1967). Though, it is a fairly common clinical scenario in the A&E of many hospitals, in West Africa (Orish et al. 2014; Oludara, et al. 2014), there is limited literature on the BID cases in Nigeria. Those available discuss pattern of mortality in A&E with emphasis on expertise of available manpower (Ike, 2008; Odia and Wokoma, 1992). The accident and emergency medical services in Nigeria was modeled after that of the United Kingdom which was largely organized by the ambulance service (Woodhead and Wicker, 2005). In this system the aim was to move emergencies as quickly as possible, with little or no resuscitative treatment, to the hospital A&E, where it was felt hospital staff was better placed to provide thorough assessment

The medical ambulance service has virtually collapsed in Nigeria, Lagos State being the only State with an organized hospital transport system in operation (Oludara, et al. 2014). Currently People bastardize and commercialize the ambulance system to convey not the living but the dead in elaborate funeral ceremonies especially among the Ibos of South East Nigeria. Emergency cases, including BID, reach the A&E in the hope such cases might be

saved using any means of transportation available (Solagberu et al. 2009). It must be emphasized that vehicles alone do not constitute a medical ambulance. In addition, there must be properly trained and organized personnel (paramedic ambulance staff) basic equipment and materials to ensure safety of the passengers from point of emergency to an appropriate health facility whether the transportation is by road, water or air.

The aim of this retrospective study was to examine the prevalence and patterns of BID in a new and supposedly more modern A&E opened in our tertiary institution in 2011.

MATERIAL AND METHOD

This was a retrospective observational study which covered 24 months period from January 2012 to December 2013. Our hospital is one out of 4 tertiary hospitals in Enugu State, South East Nigeria with a population of 3.3 million and a population density that is two and half times the national average.

This A&E attends to only adult medical and surgical emergencies. Children, gynaecological and obstetric emergencies are seen in other units within the hospital.

Sources of data collected were from patients' records, ward register in the A&E and hospital patients' statistic unit of the medical records department. Patients' basic demographic: age, sex, residence, any known previous disease, events preceding time of death if known were recorded. BID was diagnosed if there were absence of the following; no response to verbal or painful stimuli, no femoral or carotid pulse and dilated fixed pupils.

Data was statistically analyzed for simple averages and measures of statistical tendencies.

RESULTS AND DISCUSSION

The cases recorded as BID over the 24 months we studied were 88. There were 48 males (54.5%) and 40 females (45.5%) with a ratio of 1.2:1.0. Over the same period 194 cases were recorded as mortality in the hospital A/E. BID cases were recorded from age 18 to 93 years. The lowest cases were in those below 20 years (1.1%) and in those above 80 years (6.8%). The highest cases occurred in the age ranges 20-40years (36.4%) and 50-70years (33.0%).

Table 1: Age and Sex distribution of cases of BID

AGE	MALE	FEMALE	TOTAL
10--20	1	0	1
21-30	8	11	19
31-40	7	6	13
41-50	5	2	7
51-60	8	7	15
61-70	6	8	14
71-80	5	3	8
81-90	3	2	5
91-100	1	0	1
Age not recorded	7	1	8
TOTAL	**48**	**40**	**88**

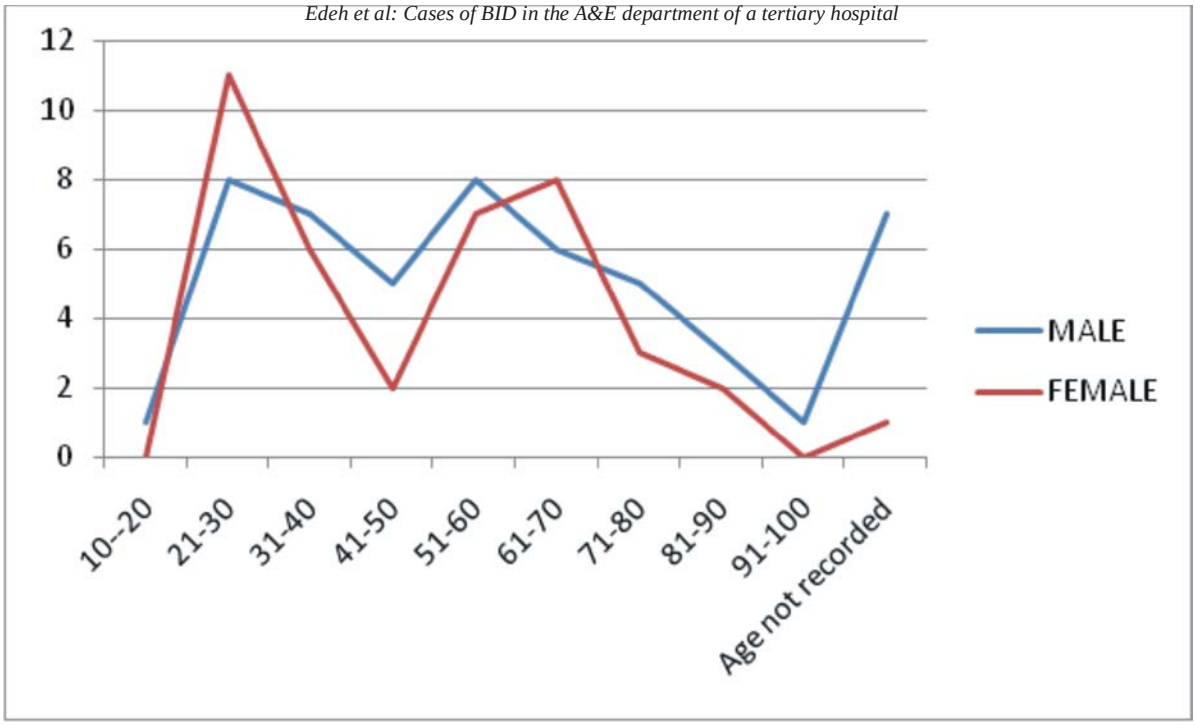


Figure 1: graph of cases of BID by age and sex

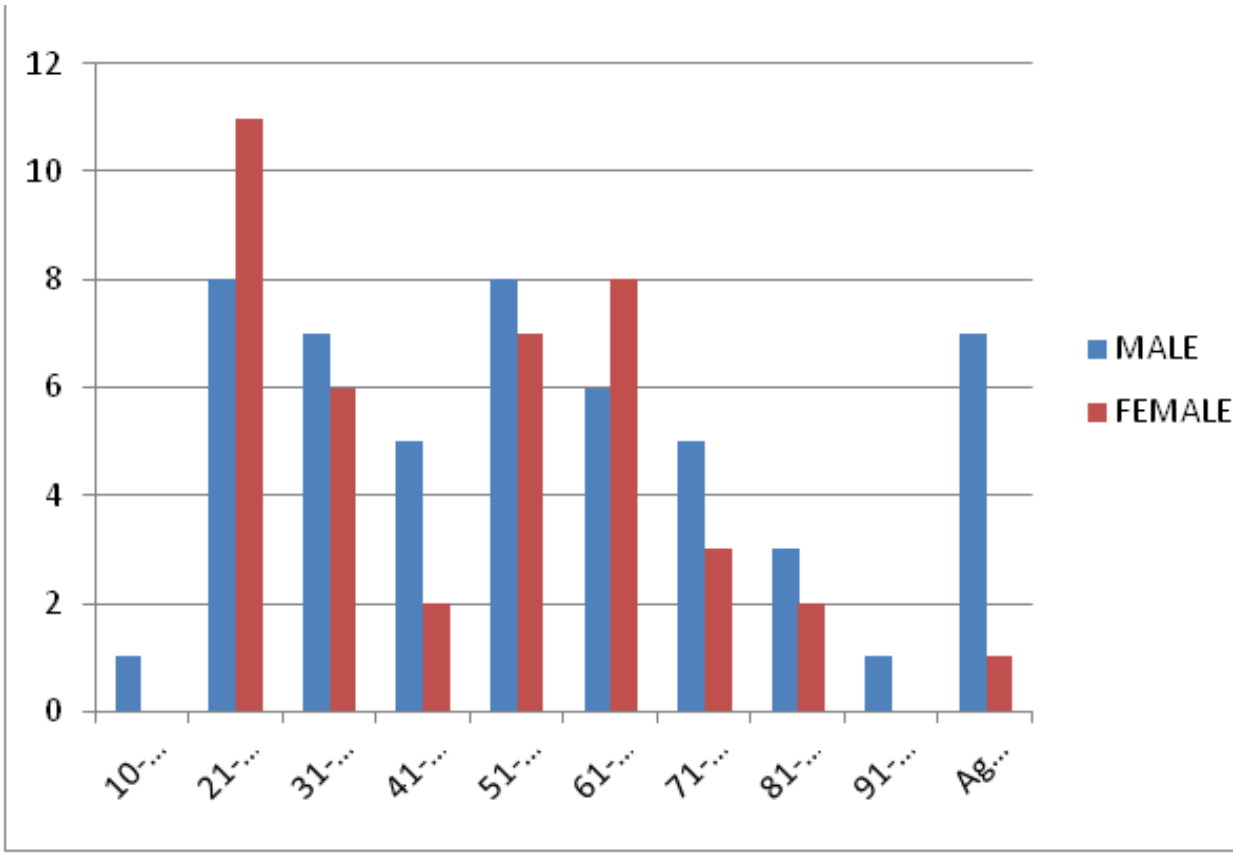
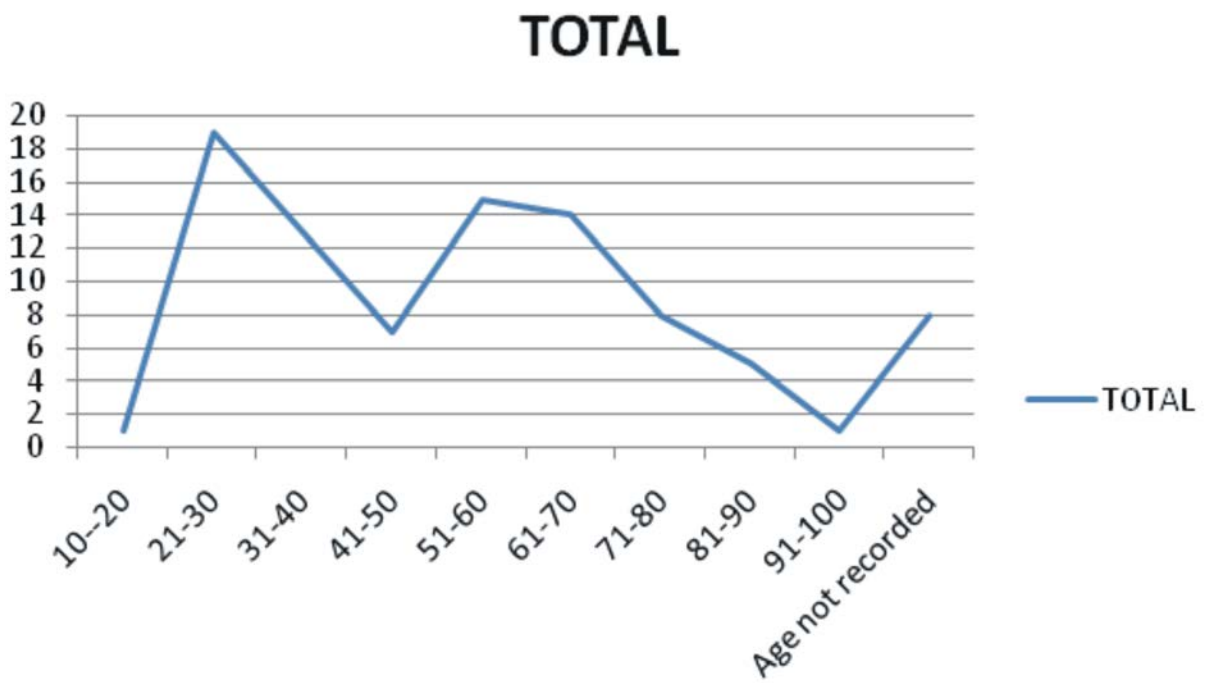


Figure 2: histogram of cases of BID by age and sex



Majority of cases had previous history of chronic illnesses though the precise diagnosis was unknown and past mortem examinations not done. Some were involved in various accidents and few died suddenly without any previous illness.

Table 2: probable causes of death

DIAGNOSIS SUMMARIZED FROM CASE RECORDS.	SUDDEN DEATHS (CARDIAC ARREST)	TRAUMA
oncologic emergencies	slumped after exercise	road traffic accidents
chronic liver diseases	slumped after pre-employment runs	gunshots - 2
HIV-AIDS related infections	previous history of cardiac arrest	
GIT haemorrrhage	slumped after binge drinking	
hypertension		
diabetes mellitus		
asthma		

The BID in a strict sense, is not considered part of hospital mortality since there is nothing the hospital or its staff can do for such a patient hence no medical responsibility on their part (Boult et al. 1994) The prevalence of 23.02% is high but lower than 31.1% in Ghana, (Orish et al. 2014). This figure is worrisome as it may just be the tip of an iceberg. With increasing national under development, poverty and vice many deaths occur outside the hospitals in Nigeria and are neither reported to any hospital nor registered. Care for almost any illness are sought in various unorthodox places- traditional healers, faith houses, quacks and these places do not report or register deaths. Many sick patients in hospitals continue to discharge themselves against medical advice for illness they do not get quick cure or cannot afford therapy to die outside a hospital, and such deaths are never registered. Therefore the true prevalence of BID

or deaths outside the hospitals may not be known.

BID is strongly related to pre hospital factors. In trauma cases such factors may include efficiency of pre hospital transport (scoop & run), distance to the appropriate health facility, nature of injury and availability and effectiveness of pre-hospital treatment (stay & play) (Burkitt et al. 2009)

It is established that pre hospital transport is the weak link within a trauma system in both developed and developing countries. And one index of measuring the efficiency and effectiveness of the pre hospital transport is the number of BID (Nicholls et al. 2007; Oludara et al. 2014).

Trauma related cases were high in this serious at 19 cases (23.%) of BID. BID cases due to trauma were high in Lagos (72.2%) but low in Ghana and mo re developed societies; (Oludara et al' Orish et al 2014; Wang et al 1995; Chiang & Wara 1999) this agree with observations from studies Worldwide where trauma related deaths stands at 10% and is the leading cause of death in the young (Radford, 2005).

In non-trauma related BID, we must consider seriousness and severity of clinical condition, stage of illness, availability of treatment centres, willingness to access preventive health services promptly, compliance and ability to afford necessary care.

Majority of BID in this scenario are related to chronic non-communicable disease. Poverty, ignorance, weak health institutions are some of the factors responsible to rising deaths from non-communicable diseases in developing countries (WHO report 2011).

Sudden deaths in this series were small. The recorded scenario was attributed to cardiac arrest: one middle age man who had previous cardiac arrest and survived arrested again and died; 3 collapsed after a marathon for a recruitment exercise, one slumped at home after evening exercise, and another slumped after binge drinking. Exercises are good but people must be screened for silent cardiac disease that can cause sudden death. Unaccustomed severe exercise is dangerous and resuscitation facilities and expertise in cardiopulmonary resuscitation (CPR) must be made available when such are planned. Training to increase knowledge of the population in CPR increased the number of survivals following cardiac arrest in a study in Taipei (Chang and Wang, 1999). We must encourage non-medical personnel in Nigeria to learn basic CPR

Sudden death is a commoner cause of BID in developed countries and the age group involved is usually above 50 years (Wang, et al: 1995, Nicholls, et al 1998).

In preventing BID from trauma cases, there must be good road network and road maintenance, traffic regulation, avoiding alcohol and drug use by road users, and we must develop a well-organized emergency service – that will provide efficient care from place of injury until admission into a health facility. Transporting people and providing good first aid can be improved in Nigeria, if the following agencies of the Nigerian government Federal Road Safety Corps (FRSC), Nigeria Security and Civil Defense Corps (NSCDC), Police, National Emergency Management Agency (NEMA) and Armed forces are trained and supported in basic pre-hospital care: as is the practice in some developed countries (Nicholls et al. 1998).

According to WHO, non-communicable disease as a cause of death is increasing in many developing countries. Cancer, diabetes mellitus, hypertension and cardiovascular disease are among the major cause of death (WHO Report, 2011). It is long overdue to formulate national screening programs supported by a national health insurance plan to make them accessible and affordable for all age groups especially the elderly. Primary Health Care Agencies should intensify efforts at health education on lifestyle modifications that will improve the health of our citizens.

It is unfortunate that clinical autopsy could not be done on those cases of BID studied. Our people are reluctant to submit their dead for clinical as against forensic autopsy for maybe cultural or financial reasons. (Amakiri et al. 1997). The numbers of pathologist are few and therefore overwhelmed by diagnosing the living. It is important that compulsory clinical autopsy is legislated on by relevant authorities to ensure all cases of BID get a clinical autopsy. This will increase our knowledge of the chronic conditions killing our people, Lagos State has already started (Faduyile et al. 2018).

CONCLUSION

From this study many people die before reaching our hospitals in Enugu and our knowledge of this phenomenon is still poor. We must continue to conduct research into this to prevent it while we urge increase health education of the people to instill proper health seeking behavior and increased government funding of the health sector to make it more acceptable, accessible and affordable.

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