



LETTER TO THE EDITOR

Dear Sir,

ORTHO-TRAUMA DEATHS IN A PRIVATE HOSPITAL: A 7-YEAR REVIEW WITH LESSONS LEARNT

Trauma is the leading cause of morbidity and mortality in the first three decades of life globally.¹ Although the younger populations form the bulk of trauma victims, the mortality peak is in the 5th and 6th decade.²

We analysed ortho-trauma deaths in a private hospital in Port Harcourt, using hospital records were used to extract all in patient hospital deaths between January 2001 and December 2007. The ortho-trauma subset was analyzed for sex-age distribution, duration between admission/ procedure and death, causes of death and surgical procedures and

anaesthesia used. In the seven-year period (2001–2007), 45 ortho-trauma deaths were recorded, with a male to female ratio of 2:2:1. The total number of deaths was 72, making ortho-trauma deaths 62.5% of the load. The largest number of deaths was in 2007 with 10(22.2%) followed by 2003 and 2005, 8(17.8%).

Majority of the deaths, 20(44.4%) occurred in the age group of 40–59; followed by 20–29, 8(17.8%). The mean age of dead patients were 46 + 19 years, male 43 + 17, and female 50 + 22 years for males and females respectively.

The 45 victims presented with 54 injuries. Twenty-one (35.1%) of victims presented with long bone fractures, 10(18.5%) with head injuries and 8(14.8%) with cervical spine injuries. Most of the injuries were from road traffic accidents,

35(57.4%). (Table 1). The common immediate causes of death included septicaemia, 10(22.2%), pulmonary embolism, head injury and adult respiratory distress syndrome contributing 5(11.1%) each. (Table 2).

Within the first week, 29(60%) were dead while there was a uniform distribution of death after procedures. Three of the deaths occurred after emergency amputation while only 16(35.6%) of the deaths occurred after surgical interventions.

The high ortho-trauma load in our center was due to the specialty emphasis of the hospital. The male preponderance was close to an earlier investigation on surgical emergency deaths in a public hospital in the same city⁴.

Older patients in their fifth and sixth decades of life constituted the victims.

Table 1: Pathologies/Diagnosis of Admitted Patients

Diagnosis	Cause									
	RTA	Gunshot	Burns	Matchet Cut	Metastatic Disease	Pathological Fracture	Diabetes	Spondylosis	Others	Total (%)
Cervical Spine Injury	7	1	–	–	–	–	–	–	–	8(14.8)
Head Injury	9	–	–	1	–	–	–	–	–	10(18.5)
Malignancy	–	–	–	–	2	–	–	–	–	2(3.7)
Fractures	–	–	–	–	–	–	–	–	–	–
Compound tibia	6	–	–	–	–	–	–	–	–	6(11.1)
Compound Femur	3	–	–	–	–	–	–	–	–	3(5.5)
Neck of Femur	–	–	–	–	–	3	–	–	–	3(5.5)
Other Fractures	5	2	–	–	–	–	–	–	–	7(13.0)
Splenic Rupture	1	–	–	–	–	–	–	–	–	1(1.9)
Chest Trauma	–	1	–	–	–	–	–	–	–	1(1.9)
Burns	–	–	3	–	–	–	–	–	–	3(5.5)
Footgangrene	–	–	–	–	–	–	4	–	–	4(7.4)
Chronic Low Back Pain	–	–	–	–	–	1	–	2	1	4(7.4)
Perforated Viscus	–	2	–	–	–	–	–	–	–	2(3.7)
Total (%)	31(57.4)	6(11.1)	3(5.6)	1(1.85)	2(3.7)	4(7.4)	4(7.4)	2(3.7)	1(1.85)	54

Table 2: Secondary Causes of Death

Diagnosis	Number (%)
Septicemia	10(22.8)
Hypovolaemic shock	3(6.6)
Severe Anaemia	4(8.9)
Head injury	5(11.0)
Hypoglycemia	4(8.9)
Spinal cord injury	3(6.6)
Pulm embolism	5(11.0)
Malignancy	1(2.2)
ARDS	5(11.0)
Aspiration	1(2.2)
CVA	1(2.2)
Tension pneumothorax	2(4.4)
Cardiomyopathy	1(2.2)
Total	45(100%)

We lost three elderly ladies within one to three weeks after surgery. The first had an open reduction of a malunited tibial fracture and was a room-mate to a terminally ill patient that died. The other two died after hip hemiarthroplasties. One lady died from adult respiratory distress syndrome and multi organ failure after she had surgery. The second had hypoglycemic coma, was resuscitated and was sat upright shortly after to be fed by a relation and a medical staff. She collapsed and died. There is therefore need to train all medical staff on basic life support techniques.

Road trauma accounted for 57.4% of the deaths which is the usual pattern.² Long bone fractures were seen in 35.1% of the victims, while cervical spine fractures and head injuries were other significant presenting pathologies that led to death. This pattern has been

noticed in previous studies in our environment.⁶

In our series, the peak period of death was in six to seven days when infections could probably have set in. This was different from the usual pattern when most of the deaths occur within 24 hours of admission², although the difference here appears insignificant. What was more significant was that 60% of victims died within one week. Death after surgical interventions was even when considering the time after surgeries. Again the population of those operated upon was small to draw any logical conclusion.

The immediate causes of death included septicaemia, pulmonary embolism and head injuries in descending frequencies. Infections still constitute a major health challenge in our vicinity.⁷ Age, immobilization, comorbidities (eg diabetes, hypertension) will only encourage the occurrence of pulmonary embolism, while some head trauma patients presented in a state that little or nothing would have salvaged them.⁸ The peak of the death after intervention occurred after amputation in diabetics who were likely hypertensives and very poorly in health.

We believe most of the deaths are preventable if the will to commit promises to enforcement in our country will be carried through. There is need for emphasis on basic life support training for all cadres of medical staff that manage patients. Public enlightenment on the need to go early to hospital and a better prehospital system of transportation and life support cannot be overemphasized.

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