

# Deaths with medicolegal implications in the elderly: experience from Benin City, Nigeria

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## ABSTRACT

**Background.** In Benin City, Nigeria, deaths with medicolegal implications have increased among the elderly.

**Methods.** Autopsy reports performed by pathologists of the police force in various hospitals in Benin City, Nigeria between January 1998 and December 2002 concerning the elderly (aged  $\geq 60$  years) who died with medicolegal implications were reviewed.

**Results.** Of 55 deaths, 15 were classified as sudden unexpected natural deaths (most were caused by cardiovascular diseases) and the remaining 40 as sudden unexpected deaths (caused by accidents, homicides, and suicides). Road traffic accident was the commonest cause of deaths with medicolegal implications.

**Conclusion.** Measures to prevent road traffic accidents should be adopted.

**Key words:** Accidents; Aged; Cause of deaths; Death, sudden; Legislation and jurisprudence

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## INTRODUCTION

Chronic diseases are the leading causes of death in the elderly,<sup>1</sup> although infections remain a major health problem worldwide.<sup>2</sup> Globally, 6 in 10 deaths are caused by chronic non-communicable diseases, 3 by communicable diseases, and 1 by injuries.<sup>3</sup> In India, chronic non-communicable diseases are the leading cause of death followed by injury and external causes.<sup>4</sup> The elderly are at greater risk than their younger counterparts of succumbing to homicide committed during robbery,<sup>5</sup> which is common in Benin City, Nigeria. Understanding the patterns of these unnatural deaths may facilitate measures to forestall such events.

## MATERIALS AND METHODS

Autopsy reports of the elderly (aged  $\geq 60$  years) whose deaths had medicolegal implications were reviewed. The autopsies were ordered by coroners

and performed by pathologists of the police force in various hospitals in Benin City, Nigeria between January 1998 and December 2002. Reports were analysed with respect to age, sex, and cause of death.

## RESULTS

Of 55 deaths, 15 (27.3%) was classified as sudden unexpected natural deaths and the remaining 40 (72.7%) as sudden unexpected deaths, in which accidents (n=31) were the most common cause, followed by homicides (n=8) and suicide (n=1) [TABLE]. Road traffic accidents (n=28) were the most common cause of accidental death, and 64.3% of the victims were pedestrians. The other cause of accidental death was falls (2 into a well and 1 from an electric pole). 51.6% of accidental deaths among the elderly occurred in those aged 60 to 69 years. Five of the homicidal deaths occurred during armed robbery; the remaining 3 were related to interpersonal violence. The only suicide case was by hanging.

**TABLE**  
**Distribution of deaths with medicolegal implications in the elderly**

Death	No. of persons (n=55)	
	Male	Female
Sudden unexpected natural death	11	4
Sudden unexpected death	32	8
Accident	25	6
Road traffic accident	22	6
Age-group (years)		
60-69	10	4
70-79	6	1
≥80	6	1
Fall	3	0
Age-group (years)		
60-69	2	0
70-79	1	0
≥80	0	0
Homicide	7	1
Suicide	0	1

With regard to the 15 sudden unexpected natural deaths, 9 were caused by cardiovascular diseases, 3 by infections (bronchopneumonia, typhoid fever, and malaria), and 3 were labelled 'cause unknown' (owing to severe decomposition of the corpse).

## DISCUSSION

In Nigeria, the medicolegal autopsy rate among the elderly was relatively low (12.2% for persons aged 0 to 14 years, 80.6% for those aged 15 to 59 years, and 7.2% for those aged ≥60 years). In Norway, 48% of medicolegal deaths were recorded in the elderly.<sup>6</sup> The difference may be related to the difference in life expectancy (78.7 years in Norway versus 51.3 years in Nigeria).<sup>7</sup> It may also reflect the value placed on the life of the elderly. Owing to the shorter life expectancy in Nigeria, investigating the cause of death in the elderly may not be considered worthwhile.

In Nigeria, sudden unexpected deaths caused by accidents, homicides and suicide are a major indication for medicolegal autopsy.<sup>8,9</sup> In developed countries, road traffic accidents are the second leading cause of injury-related deaths among the elderly and account for 20% of such deaths.<sup>10</sup> In our study, road traffic accidents accounted for 90.3% of accidental deaths. This high rate was due to the poor

condition of roads and vehicles,<sup>9</sup> which are worsened by the poor economy. To stem the problem, the Nigerian government banned the import of vehicles that had been used for more than 10 years. The high mortality rate from road traffic accidents can be attributed to the low cost of road traffic accidents and injuries in Nigeria. Such cost is about 1% of the gross national product in low-income countries, 1.5% in middle-income countries, and 2% in high-income countries. The global cost is estimated to be \$518 billion per year with low- and middle-income countries accounting for only \$65 billion.<sup>10</sup> Moreover, elderly people might have impairment in vision, hearing, and/or mobility; all of which make them more vulnerable to road traffic accidents. That 64.3% of the victims of road traffic accidents were pedestrians is probably a reflection of neglect of the elderly. Road traffic accident preventive measures<sup>10</sup> for the elderly should be adopted.

A fall is defined as a consequence of other than any of the following: sustaining a violent blow, loss of consciousness, or sudden onset of paralysis as in a stroke or epileptic seizure.<sup>11</sup> Older adults are at greater risk for experiencing a fall, and fall is a leading cause of injury deaths in the elderly.<sup>11</sup> Some wells are badly constructed and uncovered or covered with weak wooden planks and thus constitute death traps.

Homicidal death accounted for 20% of sudden unexpected deaths, of which 62.5% occurred during armed robbery and the victims died from gunshot wounds. In northern Nigeria, most homicidal deaths occurred during ethnic/religious conflicts.<sup>12</sup> In America, half of the cases of homicide were due to gunshot injuries sustained during robbery.<sup>13</sup> The suicide rate is low in Africans.<sup>9</sup> In all age-groups in Nigeria, only 1.8% of sudden unexpected deaths were suicide.<sup>9</sup> The rates were slightly higher in other African studies (3.4% and 4%).<sup>14,15</sup>

In our study, 27.3% were sudden unexpected natural deaths. In other Nigerian studies, the rates are 33.2% and 55.6%,<sup>9,16</sup> whereas in Jamaica and Thailand they were 51.3%<sup>17</sup> and 39.9%,<sup>18</sup> respectively. These studies however spanned childhood to old age. In all these studies, cardiovascular disease was the most common cause of sudden unexpected natural deaths.

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