A 10-year review of fatal community assault cases at a regional forensic pathology facility in Cape Town, South Africa

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Background. An increase in autopsied community assault (CA) fatalities was observed at the Tygerberg Forensic Pathology Services (FPS), Cape Town, South Africa (SA). There is a paucity of information on the incidence and prevalence of these cases in SA.

Objectives. To determine the patterns and trends of injuries sustained in so-called CA fatalities.

Methods. A retrospective and descriptive study was conducted. Fatal CA cases admitted to the Tygerberg FPS over the 10-year period 1 January 2003 - 31 December 2012 were reviewed. Data were collected from autopsy/postmortem examination reports, contemporaneous notes, attached hospital records, the South African Police Services (SAPS) 180 form (completed by the SAPS representative) and other FPS documentation.

Results. A total of 424 cases of fatal CA were seen during the study period, with an annual increase between 2003 and 2007 and a second peak in 2012. The cause of death in most cases was multiple injuries (42.0%), with blunt-force trauma being the basis of most injuries sustained. The area with the greatest burden of injury was the township of Mfuleni (73 CA deaths per 100 000 population). There was a predominance of males, with only one female fatality recorded.

Conclusion. Adequate policing in prevalent areas is essential to address unnecessary loss of life and the burden imposed by these cases on the criminal justice system and healthcare services.

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Most studies have focused on the clinical findings in CA cases. An investigation into these fatalities will provide invaluable information into the extent of the external and internal injuries sustained as well as the epidemiological burden and impact.

Methods

This retrospective descriptive study reviewed all CA cases seen at the Tygerberg FPS from 1 January 2003 to 31 December 2012.

The Tygerberg FPS serves a population of approximately 1.3 million and admits cases reported to police stations in the following Western Cape metropolitan areas: Belhar, Bellville, Bellville South, Bishop Lavis, Bonteheuwel, Bothasig, Brackenfell, Delft, Durbanville, Elsies River, Goodwood, Harare, Khayelitsha, Kleinville, Kuilsriver, Kraaifontein, Lingeletlu West, Mfuleni, Parow and Ravensmead. Owing to their large populations, the subsections Lingeletlu West and Harare of Khayelitsha have their own police stations.

Data were collected and entered by the principal investigator (CIH) using Microsoft Excel spreadsheets. The statistical analysis was performed by CIH in conjunction with a statistician from the Department of Statistics at Stellenbosch University. A summary of the statistics was achieved through constructing frequency tables for categorical variables, and calculating means and standard deviations for continuous data. Results were graphically depicted using histograms.

Case files of all deaths from homicide over the study period were drawn by CIH. Data were gathered by reviewing the documents listed in Table 1.

All cases referred to Tygerberg FPS for a medicolegal autopsy with a history of CA/bundu court/kangaroo court in the final autopsy/postmortem examination report and/or other attached
contemporaneous notes were included. Cases in which no definite history of CA/ bundu court/kangaroo court was found after perusal of the final autopsy/postmortem examination reports, contemporaneous notes, collateral information from police and attached hospital records, e.g. cases of other traumatic deaths from gunshot wounds, assaults or multiple injuries, were excluded, as were cases in which the final autopsy/postmortem examination report was not completed or was not available.

All information was anonymised and treated confidentially. Ethics approval was obtained from the Health Research Ethics Committee (HREC) of the Medicine and Health Sciences Faculty, Stellenbosch University (ethics reference No. S13/09/162).

Results

A total of 8 634 autopsy/postmortem examination reports of homicidal deaths were perused, and 424 fatal CA cases were identified during the study period (Fig. 1).

Areas where assaults occurred

Most fatalities were reported in Khayelitsha \((n=166)\) and Harare (subsection within Khayelitsha, \(n=84\)) (Fig. 2). The other areas where fatalities frequently occurred were Mfuleni \((n=47)\), Delft \((n=37)\), Kraaifontein \((n=24)\) and Linglethu West (another subsection within Khayelitsha, \(n=16\)). These are all socioeconomically deprived areas in the region. However, when considering the total population per area, the highest burden of injury is seen in Mfuleni (73 CA deaths per 100 000 population) \((5)\) (Table 2). Fifteen CA fatalities included in the study fell outside the range of areas that present to the Tygerberg FPS, reflecting the fact that the assaults occurred in another suburb/township and the victims were transferred to hospitals within the drainage areas of the facility for further treatment and subsequently died.

Age and gender

The age range of victims was 14 - 62 years (mean 27) (Fig. 3). Most victims were male, with only one female.

Injuries sustained

In 42.0% \((178/424)\) of the fatal CA cases, the cause of death stated on the autopsy/postmortem examination report was multiple injuries, indicative of the extent and multiplicity of injuries sustained in the CA fatalities. This was followed by head injuries \((22.9%, 97/424)\), blunt-force trauma \((13.9%\, 59/424)\) and soft-tissue injuries \((13.0%, 55/424)\) (Fig. 4).
The subclassification of the individual injuries sustained for all cases was as follows: abrasions 74.8% (317/424), lacerations 74.3% (315/424), skull fractures 57.6% (244/424), contusions 43.4% (184/424), closed brain injury 30.9% (131/424), tramline bruises 26.2% (111/424) and stab wounds 19.6% (83/424). This indicates that most cases showed evidence of blunt-force trauma. A combination of blunt- and sharp-force trauma was seen in only 4.0% of cases. Fourth-degree burns were seen in only 3.1% of cases, and first- and second/third-degree burns in only 4.0%. ‘Necklacing’ (the practice whereby victims are set alight by placing a motor vehicle tyre around their necks, dousing it with a flammable liquid, and then setting it alight) was seen in 0.9% of cases (4/424). Gunshot wounds accounted for 5/424 deaths.

In 74.3% of cases, a true history of CA was available. Others were assumed to be CAs by the South African Police Services (SAPS) official involved with the case, based on the injuries sustained or hearsay history. These bodies were often found at the side of the road or in an open field, with no witnesses to the crime, and the deceased was frequently unidentified at time of autopsy.

**Objects found at the scene of death**

In some cases, bloodied objects were found at the scene of death and listed on the SAPS 180 form attached to the autopsy/postmortem examination report. These were assumed by SAPS officials to be the objects used during the assault. In 72.9% of cases no mention was made of any objects at the scene, but in 21.0% of cases these were blunt objects: stones (10.9%), wooden sticks (5.0%) and bricks (5.0%). A sjambok, which is a whip or rod-like object sometimes made from rubber or animal hide, was seen in 2.0% of cases.

**Restraints/ligatures used**

In 10.1% of cases definite evidence of restraint was seen, in that the hands and/or feet and/or neck were bound. In a cluster of cases, two decedents were allegedly assaulted and died on the scene, and in another instance three decedents were assaulted at the same time and died simultaneously. This was usually because the decedents had allegedly committed crimes together and been caught in the act, or had been caught by community members when together.

**Hospitalised cases**

Of the victims of CA, 8.5% were hospitalised. The main complications in hospitalised cases were:

### Table 2. Distribution of CA cases in the areas of highest prevalence, per 100 000 population

<table>
<thead>
<tr>
<th>Police station</th>
<th>Population</th>
<th>CA deaths, n</th>
<th>CA deaths/100 000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khayelitsha (including Harare and Lingelethu West)</td>
<td>391 749</td>
<td>266</td>
<td>67.9</td>
</tr>
<tr>
<td>Mfuleni</td>
<td>64 269</td>
<td>47</td>
<td>73.1</td>
</tr>
<tr>
<td>Delft</td>
<td>152 030</td>
<td>37</td>
<td>24.3</td>
</tr>
<tr>
<td>Kraaifontein</td>
<td>62 933</td>
<td>24</td>
<td>38.1</td>
</tr>
</tbody>
</table>

![Fig. 3. Age distribution of victims of fatal CA.](image)

![Fig. 4. Injuries sustained by victims of fatal CA.](image)
were pneumonia (3.3%), followed by rhabdomyolysis (2.6%) and renal failure (1.9%) (Fig. 5).

Blood alcohol concentration
Blood specimens for measurement of the blood alcohol concentration are taken in all cases in which postmortem examinations are performed after presumed natural or unnatural death of an adult, unless they were hospitalised for more than 24 hours prior to death.

Fifty-eight percent of cases had a blood alcohol concentration of 0 - 0.05 g/100 mL, followed by 14.4% with a level of 0.10 - 0.15 g/100 mL, 7.1% with a level of 0.16 - 0.20 g/100 mL and 5.2% with a level of 0.21 - 0.25 g/100 mL. The last three levels correspond to being moderately to severely under the influence of alcohol, and confirm that alcohol is a risk factor in violent or homicidal deaths.4

Discussion
The results of this study reflect a steady increase in CA fatalities from 2004 to 2008, with a decrease thereafter and then a second peak from 2010 to 2012. No definite reason explains the dramatic peak in 2008. However, a study on homicidal deaths by Cocks and Saayman7 listed a total of 67 cases of CA/mob justice fatalities between 2007 and 2008 at the Pretoria Medico-Legal Laboratory, with most of those cases (n=51) occurring in 2008. The authors proposed that this peak was due to the ‘xenophobic attacks’ that occurred at that time. Review of the autopsy/postmortem examination reports and additional notes in our study showed no written record that any of these fatalities were related to xenophobia. The drop in CA fatalities noted in 2010 (Fig. 1) could be attributed to the strict policing enforced during the 2010 Soccer World Cup held across SA at that time. Information on what types of crimes precipitated these attacks was not available on the autopsy/postmortem examination report, so whether these were petty or more serious crimes was unknown. This conflicted with a study in Tanzania, where most alleged ‘mob justice’ killings were due to alleged theft.9

The ages of the decedents were similar to those in a local study by Forgus et al.11 in Khayelitsha, where CA cases seen at a hospital in Khayelitsha were 18 - 61 years of age. Rosedale and Wood9 found the age range to be 14 - 53 years. It should be noted that even teenagers are falling victim to this type of assault. Rosedale and Wood found that the CA victims who presented to hospital were ‘beaten with sticks, metal bars and sjamboks’ – all blunt objects. This corresponds with the evidence of blunt-force trauma to the body noted in most cases in our study. These objects were ordinary items that were incidentally found at the scene and easily accessible to the perpetrators of the presumably spontaneous assaults.

Another important finding was that ‘necklacing’ fatalities accounted for only 0.9% of cases, suggesting that this practice, which started during the apartheid era, with the first ‘necklace’ killing reported in Port Elizabeth in 1985,10 is no longer as common as it was during the political unrest of the latter part of the apartheid era. The very low incidences of gunshot and ‘necklacing’ fatalities could also be due to the fact that tyres and firearms may not be readily available in the townships.

The low percentage of cases that were hospitalised could be because very few victims of CA survived long enough to get to hospital, succumbing to the severe and extensive injuries sustained.

In the studies by Proctor et al.11 and Rosedale and Wood,9 most victims of CA who presented to hospital developed acute kidney injury secondary to rhabdomyolysis. This is a known complication of which clinicians need to be aware in cases where extensive blunt-force injuries to soft tissue are sustained.9,11 This adds to the load on the healthcare system in terms of requirement for dialysis and financial cost.

This study has highlighted the public health burden relating to common assault in the communities described, with a view to providing insight into the injuries sustained and their complications to clinicians who treat these cases and to the public health authorities of the Western Cape Province of SA.

Study limitations
There are several limitations to our study. Cases could have been missed because no history of CA was known or specified on the SAPS 180 or TH13/FPS 100 forms. More detailed information, documented or verbal, from the SAPS official involved would have prevented some cases being excluded. Also, cases were drawn from only one major medicolegal facility in Cape Town. A duplication of this study using data from all medicolegal facilities in the Western Cape may show a more accurate representation of the incidence of these cases at a provincial level. Comparing the results of this study with others proved difficult because no formal or publicised medicolegal postmortem data relating to CA fatalities exist in SA.

Recommendations
Arising from our study, we offer the following recommendations: (i) these deaths should officially be termed ‘CA fatalities’, and the term ‘vigilante justice’ should not be used; (ii) CA fatalities should be subclassified as a form of violence and be reported as such by the SAPS and included in the national formal crime statistics; and (iii) monitoring the number of CA cases presenting to healthcare services in the region could provide valuable data on the extent of this type of violence.
facilities – especially trauma units – will establish the burden placed on clinicians and healthcare facilities as a whole. All these will aid in enhancing stricter policing protocols by the SAPS in areas where this form of violence is prevalent, as well as in suggesting better strategies to combat the problem.

**Conclusion**

In this retrospective review of CA fatalities, it was found that the cause of death in most cases was multiple injuries due to blunt-force trauma. The area with the highest burden of injury was the township of Mfuleni. Males were almost exclusively assaulted, and the fatalities are increasing annually. They create an additional burden on the forensic pathologist/forensic medical officer in terms of autopsy time, additional investigations, and completion of the autopsy/postmortem examination report. Adequate policing in prevalent areas is essential in order to address unnecessary loss of life and the additional burden imposed on the criminal justice system and healthcare services.

**References**


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