

**CASE REPORT****PATHOLOGY/BIOLOGY**

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## The 'Break Enter and Die' Syndrome May Involve Significant Injury to Major Neck Vessels

**ABSTRACT:** Death from incised wounds of major vessels may occur during illegal entry of premises. Wounds are often relatively unimpressive having been caused by thin shards of glass. Alcohol and/or drugs have often been taken that have impaired coordination and contributed to a failure to take appropriate action. A 37-year-old man slipped and fell while attempting to enter a house through a window that he had just broken. He was found dead surrounded by a large amount of blood. At autopsy, a single horizontal, deeply incised wound of the anterior neck was present with transection of the internal jugular veins bilaterally and the right common carotid artery. Toxicological studies were negative for alcohol and common drugs. Death was due to exsanguination and air embolism. This case demonstrates that the injuries sustained during such activities may be quite extensive and involve major neck vessels. Alcohol and drug intoxication are not necessarily involved.

**KEYWORDS:** forensic science, incised wound, neck, break enter and die syndrome, illegal activity

Certain activities associated with illegal entry into premises may result in injury or death of the perpetrator. This occurs, for example, when an individual is attempting to climb through a window that has been broken to facilitate entry. Deep penetrating injuries from glass shards may result in quite significant vascular damage with only small external wounds. A case is reported where a far more extensive injury resulted from a fall onto broken window glass during an attempted break in.

### Case Report

A couple who had just returned to their empty house from a short holiday were asleep in their bedroom when they were awakened in the early hours of the morning by the sound of breaking glass from the window adjacent to their bed. They called out and then heard a crash; when they looked outside, they could see the body of an adult man lying face down surrounded by a pool of blood. His breathing seemed abnormally loud and soon ceased. They also noticed broken glass on the floor of their bedroom as well as a broken statue from their garden. Police investigators documented blood spatter on the external window and wall of the house (Fig. 1) as well as inside the bedroom.

At autopsy, the body was that of a 37-year-old man with the only significant injury being a horizontal, deeply incised wound of his neck measuring approximately 120 cm in length (Fig. 2). A blood-stained shard of glass was held in his right hand (Fig. 3). The front of his clothing was soaked in blood with smearing of blood on the anterior chest, abdomen, and arms. The neck wound

had cleanly incised edges and was located immediately above the thyroid cartilage. There were no hesitation or defense wounds. The epiglottis and tips of the superior horns of the thyroid cartilage had been cut through, and the wound extended to the posterior wall of the pharynx. In addition to strap muscles of the anterior neck, both internal jugular veins and the right common carotid artery had been transected. Opening of the auricle of the right atrium of the heart underwater released numerous air bubbles, in keeping with air embolism (The body showed no evidence of putrefaction).

There were no other significant injuries or underlying organic diseases that could have caused or contributed to death. Toxicological analyses of blood revealed no alcohol or common prescription or illegal drugs. Death was therefore attributed to hemorrhage and air embolism from an incised wound of the neck. It appears that the deceased had attempted to break into a house that he thought as unoccupied by breaking the front window with a garden statue. As he was about to enter the bedroom the occupants had called out, startling him and causing him to lose his balance on the sloping window sill. In falling, he had landed on his neck on the remaining fragments of window glass that were still held in the frame, thus sustaining the injury that had resulted in his speedy death.

### Discussion

A wide range of possible causes of both natural and unnatural deaths may occur while an individual is engaged in illegal activities, the latter including trauma from high-speed car chases, falls, entrapment, gunshot wounds, and inhalation of products of combustion (1). A subset of cases has been described where individuals, often impaired by drugs and/or alcohol, have exsanguinated from apparently minor incised wounds sustained while attempting to enter or leave premises through broken windows. Sharp shards of

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FIG. 1—The broken window with surrounding blood spatter and the evidence of extensive hemorrhage (a). A close up of the broken window glass (b).

glass have caused stab wounds that have breached the integrity of major blood vessels resulting in fatal hemorrhage. This has been termed by the author the 'break enter and die' syndrome (1). Such events are not common, with only 18 deaths in a German study of 799 cases because of sharp force injuries associated with architectural glass, none of which were apparently associated with illegal activities (2).

A variety of factors contribute to a lethal outcome in these circumstances, including intoxication with failure to appreciate the severity of the injury, inability to adequately apply rudimentary first aid measures (such as direct pressure over the bleeding point), and failure to seek medical attention. In addition, adrenergic responses and vasodilation from alcohol, drugs, and the underlying situation may also hasten exsanguination.

Although a typical case of 'break enter and die' syndrome usually involves relatively minor injuries externally, the current case demonstrates that quite significant trauma may also occur. While stabbing and cutting of the neck may occur relatively easily from a variety of household objects including broken glass and bottles (3,4), this case differs in that the mechanism involved the body falling onto the edge of broken window glass resulted in a slicing wound of the throat with the incision extending down to the posterior wall of the pharynx, transecting both internal jugular veins and the right common carotid artery. Heavy blood staining of the victim's clothing and at the scene was in keeping with death from exsanguination, in addition to air within the right atrium indicating that air embolism had also occurred.

The wound to the neck in this case was more typical of a homicide than a suicide, as individuals who have their throats cut during a homicide often have a single, large incised wound, such as this, that transects major vessels on both sides of the neck, without evidence of additional smaller 'hesitation' wounds that characterize suicides (5,6). In addition, in suicide attempts, the major vessels may not always be incised as the wounds do not pass deeply enough through the sternomastoid muscles (7). The absence of other wounds, particularly, 'defense injuries' of the hands or forearms (8),



FIG. 2—Deeply incised wound of the neck in a 37-year-old man who slipped and fell while attempting to enter a premises illegally through a window that he had just broken. The wound passed immediately above the thyroid cartilage, transecting the epiglottis and the tips of the superior horns of the thyroid cartilage, and transected both jugular veins and the right common carotid artery.

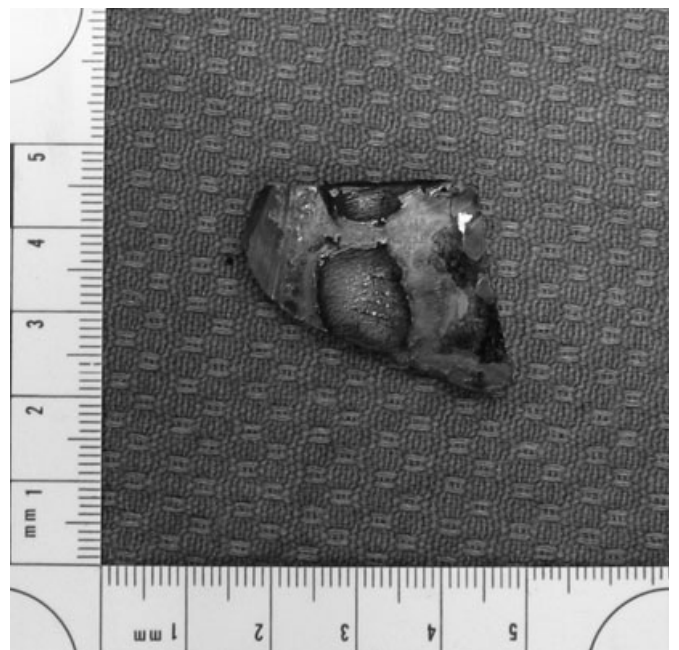


FIG. 3—A blood-stained shard of glass had been held in the victim's hand.

however, was compatible with the witness descriptions and the scene findings that indicated an accidental manner of death.

Whether the shard of glass in the victim's hand was being used as a potential weapon as has been previously reported (9) is uncertain, as the window glass was only broken shortly before the victim slipped and fell. Thus, it may represent agonal grasping.

It appears that gaining illegal entry to premises by breaking windows or glass doors carries a definite, although rare, risk of significant injury. Certainly, blood stains on broken window glass from minor injuries are sometimes encountered at these scenes by investigating police officers and may lead to identification of a perpetrator through DNA matching or fingerprints. Although lethal injuries under these circumstances often appear relatively innocuous, quite extensive incised wounds may occur which may have the characteristics of deliberately inflicted trauma. The current report also demonstrates that alcohol and drugs may not necessarily be involved in such cases and that the injuries sustained may not be amendable to either first aid or medical treatment. When cases such as this occur, evaluation of the death scene and correlation with witness statements and autopsy findings should enable clarification of the manner of death.

**Conflict of interest:** The authors have no relevant conflicts of interest to declare.

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