



Pathology & Biology Section – 2005

G25 An Expert Witness Requests Re-evaluation of SOP in Autopsy Reporting, Supported With Case Examples

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After attending this presentation, attendees will gain an appreciation for the importance of listing all breached arteries by name and injury on autopsy reports.

This presentation will impact the forensic community by suggesting a standard operating policy revision in autopsy reporting where arterial injury is ignored if absent from direct cause and/or manner of death.

Medical experts should name all breached arteries and include interpretation of injury to facilitate reconstruction of criminal events. This presentation will illustrate with case examples where knowledge of arterial injury, even if not listed in the autopsy report, could have saved time and concern for justice and assisted reconstruction of incidents from bloodstain pattern evidence.

Arterial injury is often encountered in casework, yet not all injuries are mortal. Breach may occur to the carotid, temporal, brachial, and deltoid arteries, which may project considerable arrays of blood drops without resulting in death. On the other hand, even minor arterial vessel injury may shift results from a survivable assault to death from homicide, suicide, or accident via hypovolemic shock. When reconstructing crime events, it is essential to know that arterial blood vessels were breached. The identification and interpretation of arterial injury requires medical expertise.

For example, a gunshot wound to the head which nicks the temporal artery may be reported as GSW to the head, without listing arterial injury. This omission may limit time and detail in reporting, but can create inconvenience and embarrassment later when investigators attempt to place the origin of an assault. Without specific information regarding arterial damage, reconstruction conclusions may err. Three less than satisfactory ways in which information regarding arterial damage may be obtained after the autopsy report:

1. Law enforcement representatives attending the autopsy may ask the pathologists technical questions.
2. The bloodstain pattern experts may interview the pathologist at a later date.
3. Attorneys may bring out the information during direct or cross examination at trial.

The least desirable consequence may be ignoring the distinct arterial damage bloodstain patterns because no arterial injury was mentioned in the autopsy. Arterial damage from even minor injury may contribute to rapid blood loss. In such cases the cause of death may be listed as exsanguination. Identifying where the artery was breached positions the victim where the crime emphasis of survival (assault) versus death (homicide) occurred.

Three case examples are shown to emphasize the essential information possible when arterial damage is recognized.

Case 1: A homicide occurred in a dormitory building. Bloodstain patterns were found at two locations: in the victim's room and along the hall outside the room. An expert was hired to answer the question of where the fatal assault began. The identification and position of the injured artery, and behavior of blood drops distributed best answered the question.

Case 2: Statements of an assailant placed a victim over a large pool of blood when the assailant left the scene. When photographed, the victim's body was in an entirely different position with evidence of considerable arterial rain between positions. Information obtained during the investigation suggested that a second assailant could have committed the murder after the first one left. Because no interpretation of the bloodstains was initially made, and the police took the confession without verification, it is possible that justice was not served in this case.

Case 3: An alleged drive-by shooting was shown to be a homicide within the vehicle when the tracking of the blood was aligned with arterial damage to the carotid artery. Death was by hypovolemic shock 24 hours later.

In conclusion, adding the name and injury of breached arterial blood vessels to autopsy reports will supply essential information and prevent later inconvenience and possible reverses of justice.

Arterial Injury, Autopsy Reporting, Bloodstain Patterns