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Christine DuBois  
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Keego Harbor, MI 48320

Re: People vs. Kenneth Twyman Bleuw

Dear Ms. DuBois,

I reviewed the material you sent me regarding this case. It included two CDs with scene and autopsy pictures as well as laboratory evidence processed by the Michigan State Police, the autopsy report by Dr. Kanu Virani, a transcript of Dr. Virani's trial court testimony and Mr. John C. Leonard's report on the case.

The essence of the case is that Mr. Bleuw was convicted for the homicide of Jennifer Webb, a 32 year old white female in the last trimester of pregnancy. She was found suspended by an extension cord wrapped around her neck from the luggage rack of a car parked on the side of a road.

At the autopsy, inspection of the body showed a ligature mark around the neck with the knot on the left side. There was no injury above or below the ligature mark. There was an abrasion on the left cheek and an abraded contusion on the right mandible. There were contusions on the inner (axillary aspects) of both arms, the lateral surface of the right arm, and the dorsum of the right forearm and right hand. The report describes dislocation of the right wrist.

Internally, there was no injury to the soft tissues of the neck. The report explicitly states that there was no hemorrhage in the muscles of the neck, or internal respiratory or vascular structures. There was no airway obstruction. The brain was intact although congested, a common phenomenon after death from many causes. There were also two small areas of hemorrhage in the right parietal region of the scalp and a small hemorrhage in the right temporal muscle.

The conclusion of the autopsy report is that there was neck compression because of congestion of the face and brain along with pulmonary edema and congestion,

contusion of the arms, right forearm and hand, and hanging with a ligature mark around the neck.

There is no objective evidence to conclude there was compression of the neck, and this diagnostic conclusion is unsupportable based on the autopsy findings. There were no conjunctival or periorbital petechia. There was no hemorrhage within the soft tissue of the neck, as would occur with manual strangulation; this would also result in petechiae. Other than the ligature mark around the neck, there is no other injury to conclusively support any kind of compressive effort on the neck.

Pulmonary edema is a nonspecific finding often seen in terminal heart failure from many causes. At any rate, the combined weight of the lungs in this case is 815 grams and the edema is described as "mild." The average combined weight of the lungs in an adult female is about 750 grams; the weight in this case is within 10% of the average combined weight. To assert that pulmonary edema is present, fluid must easily exude from the cut surface of the lungs and foam is often present in the airway. No such findings are described. This means the existence of pulmonary edema is doubtful.

There are two basic kinds of neck holds: the choke hold and the carotid sleeper hold. The choke hold involves anteroposterior compression of the neck with injury (fractures) to airway structures such as the cricoid cartilage and larynx and displacement of the tongue with obstruction of the hypopharynx. Injuries like these cause soft tissue hemorrhage and tend to be self evident. In the carotid sleeper hold there is lateral compression of the neck with compression of the carotid arteries, decreased blood flow to the brain and preservation of the airway, and can result in no visible soft tissue injury. In view of this, if there was lateral compression of the neck, testimony that the deceased would have been unable to breathe is incorrect; the latter would have happened in the case of a chokehold, and there would have been objective signs that it happened. There is confusion in the testimony regarding a chokehold versus a carotid sleeper hold and their manifestations.

I doubt that compression could consistently be applied for the 2 to 5 minutes mentioned in court testimony. This is physically difficult to do by the person inflicting the compression. Loss of consciousness after a carotid sleeper hold is supposed to happen quickly, and recovery is also swift after pressure is released.

In the testimony, there is discussion about the mechanism of venous and arterial obstruction. Dr. Virani was asked if veins would collapse before arteries, which they do. However, if this had been the case, and arterial blood continued to flow

into the head while the veins were collapsed, congestion of the head and neck should be much more prominent, since the venous outflow of the head is supposed to be obstructed. The congestion of the head was described as mild. Hence, obstruction of the venous system with patency of the arterial flow into the head would not have been possible. Lateral compression of the neck would not have affected the vertebral veins in the posterior neck either, which would also have provided an avenue for blood to flow out of the head.

There is mention of the carotid sinus as a structure that monitors oxygen continuously in the arterial system. This is incorrect. The carotid sinus is a baroreceptor that monitors blood pressure. The carotid body, a different structure altogether, has chemoreceptors that monitor oxygen and is situated near the carotid sinus, but is anatomically distinct from the carotid sinus. Whether or not pressure on these structures in the neck can cause death has never been demonstrated and is anecdotal. There are conditions in which there is increased sensitivity by the carotid sinus and body to pressure, but they are commonly seen in older individuals with cardiovascular disease. This is not the case here.

The deceased was pregnant. This causes an increase in heart rate, and the deceased also had increased blood pressure, a cause for concern in the 3<sup>rd</sup> trimester of pregnancy. I think this would have influenced the ability of direct pressure on the carotid sinus and body to exert significant cardiovascular effects.

There was discussion during cross examination about neck injuries associated with sudden dropping of the body. If this would have happened to any significant extent, there would have been visible injuries. The most significant injury is fracture of the arch of the 2<sup>nd</sup> cervical vertebra and perhaps hemorrhage in the posterior neck. Although the autopsy report described intact cervical vertebrae, this states how the neck looked anteriorly where you can only visualize the vertebral bodies. Injury to the posterior neck (including fractures of the posterior vertebral arches) is visible only with a posterior dissection of the neck, for which there is no description in the autopsy report and hence I assume was not done. An x-ray of the neck was not done either. Hence, the statement that "there was no injury whatsoever inside of her neck organ" is inaccurate because the neck was not completely examined grossly or radiologically.

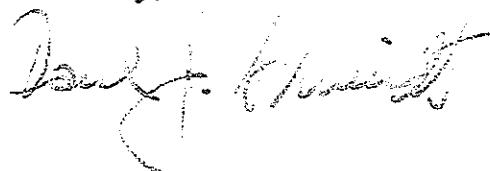
What is left, then, is a ligature of the neck such as one sees in hanging by passive suspension of the neck. That there are no petechiae or soft tissue injuries is true for the majority of cases where this happens. Demonstrating in court the mechanism of compression asphyxia based on the findings present during the autopsy, as

happened during trial, is speculative, and, as mentioned earlier, contained factual errors. Any injury to the neck outside of the findings of hanging with the electrical cord is not biologically, objectively demonstrable. Because there was no posterior dissection of the neck, the presence of injuries there is unknown.

The injury to the right wrist merits mention. It is described as dislocated. I doubt this is true. The pictures look like a typical Colles fracture, which is a fracture of the distal radius with dorsal displacement of the wrist and hand. This kind of injury most often happens when a person falls with an outstretched hand on a hard surface. There are no x-rays of this injury. There was also no dissection of the fracture site to look for hemorrhage. This would have helped determine whether the fracture was antemortem or postmortem, and could potentially modify the narrative of the causation of injury.

In summary, the materials reviewed most accurately portray hanging as the cause of death of Jennifer Webb. There are objective, documented signs of this. Compression of the neck is speculative and not demonstrable. There was incomplete evaluation of injuries.

Sincerely,



Carl J. Schmidt, M.D., M.P.H.

Subscribed and sworn before me, this 10<sup>th</sup>  
day of OCTOBER, 2013, a Notary Public  
in the State of WYOMING County,  
WYOMING.



(Signature)  
NOTARY PUBLIC  
My Commission expires February 22, 2014