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Unusual Methods of Human Identification Used in Three Cases

This is a report of three cases of homicide, all of which were solved by unusual physical features which led to the identification of each of the deceased, and, subsequently, to the arrest and conviction of each of the perpetrators of the crimes.

Case 1

A young lady was found lying on a roadway within the garbage dump at Everett, Wash. She wore expensive clothing in very good taste. Her coat was thrown over her body. Her legs were doubled up and she was in complete rigor. Body temperature approximated the outside temperature which was 42°F. Her age was estimated at 25 to 30 years. She was semiobese, weighing 160 lb with a height of 5 ft 3 in. Her shoes were found near the head of the body and her dress was pulled up and her girdle pulled down. Two buttons had been pulled off the coat with considerable force, leaving only some thread attached to the coat. Her suitcoat was pulled up, exposing the skin of the back. The clothing was wet from the rain which had occurred a few hours before she was found. External examination of the body showed widely dilated pupils, markedly hyperemic conjunctivae, blood oozing from the mouth, and a protrusion of the tongue. Small bits of gravel from the roadway were embedded on the side of the face which rested on the roadway. The breasts were very large, the areolae were pigmented, and there were abdominal striae. There was an old surgical incision slightly to the right of the midline of the lower abdomen. Hemorrhagic excoriations were noted on the right thigh. The entire face, head, and upper neck were suffused. Bilateral scars were present on the lateral surfaces of both great toes, as a result of previous bunionectomy operations. Bloodstained fluid was oozing from the vagina.

The initial autopsy incision showed bubbles of air in many of the veins. The uterus was enlarged, extending above the umbilicus, and had a dark hemorrhagic color. Superficial and deep abdominal veins contained air bubbles. Air was present in the superficial veins of the uterine wall. The coronary and mesenteric veins had a beaded appearance due to air bubbles. The veins on the posterior surface of the sternum contained large beads of air. The enlarged uterus contained a male infant, 6½ to 7 months of fetal age, using the crown-rump measurement. The amniotic cavity had not been ruptured. The cervix was large and patulous, contained bloodstained mucus, and no tenaculum marks were found. Seventy ml of air were aspirated from the right auricle and ventricle. The blood in the right heart was mixed with foam and air bubbles. At this point in the autopsy examination

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it appeared perfectly clear that the cause of death was air embolism, air having been introduced into the uterine cavity by means of a catheter.

There were many scratches and hemorrhages across the anterior surface of the neck, suggesting manual strangulation. Strangulation was confirmed by the finding of petechial and ecchymotic hemorrhages into the strap muscles of the neck, the upper end of the esophagus, the epiglottis, and the scalp. At this point there were two obvious possible causes of death: namely, manual strangulation and air embolism.

There was a thick recent hemorrhage 2 cm in diameter into the right parieto-occipital area of the scalp. The brain appeared normal. Vaginal fluid was negative for sperm and acid phosphatase. Biting of the tongue produced the blood in the mouth.

With two obvious causes of death (air embolism and compression strangulation), it was necessary to reconstruct the sequence of events which occurred in the production of these lesions. It was the author's suspicion at this time (later confirmed after arrest of suspects) that a catheter was used in an attempt to produce an abortion which resulted in air embolism. In previous experiments on dogs [1], it was observed that unanesthetized dogs injected with intravenous air become extremely violent, bark, make valiant efforts to get off the operating table, and finally die in generalized convulsions. In animals this requires only two to three minutes. The same sequence of events undoubtedly occurred in this girl after the air was introduced during the attempted abortion. Her struggles to get off the table resulted in a blow on the head together with a very hectic period of strangulation incurred in an attempt to hold her down on the table.

The observation at autopsy leading to identification of this individual was the bilateral bunionectomy. Local hospital surveys made within hours of the time of autopsy revealed, among others, the name of a young lady, age 24, who had had a previous bilateral bunionectomy one year before. A check by the police revealed that she was missing. Further investigation led to the rapid apprehension of the individuals who had attempted the abortion which had been performed on the bed of a camper truck.

Case 2

At 10:00 p.m. on Thursday, 14 Dec. 1967, a fire was observed on an ocean beach on the coast of the State of Washington. Upon investigation by the police, the fire was found to be in driftwood material which included a burning human body. A gasoline odor was present. The fire was extinguished with carbon dioxide, revealing the presence of a badly burned body of a young female.

External examination showed an individual 5 ft 2 in. tall, weighing approximately 110 lb. The burning was most prominent over the face, scalp, neck, left arm and hand, upper chest and breasts, left leg, and left side of the back. The body had apparently been clothed, although much of the clothing was burned away. The eyes were closed, and on opening the lids a pair of well-preserved contact lenses was found. There were heat contractures of the extremities, producing a characteristic pugilistic pose. Identifying facial features were obliterated by the burning. Age was estimated at approximately 25 years.

Dental examination revealed only two amalgam fillings and three missing teeth. No cutaneous tumors, surgical scars, earlobe perforations for attaching earrings, or other physical features which would assist in identification were noted. The remaining clothing bore no labels or laundry marks. There were five knife-stab wounds on the anterior surface of the chest. One of these entered the interventricular septum between the right and left ventricles of the heart, creating an artificial interventricular septal defect, and cut across one of the leaflets of the mitral valve. There was also a through-and-through stab wound of

the left lung with massive hemoperitoneum and hemopericardium. Vaginal fluid showed no evidence of sperm or acid phosphatase. Blood alcohol and carbon monoxide determinations were negative. There was no soot staining of the mouth or tracheobronchial tree. Subsequent toxicology examination was negative. Body identification was achieved almost entirely by examination of the contact lenses. With the aid of a local prescription optical company, the prescriptions of both the right and left lenses were determined. Meanwhile, a lady in Seattle reported that her daughter was missing. She provided the name of an ophthalmologist who had prescribed contact lenses for her daughter.

Table 1 shows a comparison of the prescription of the lenses taken from the body with those manufactured by the Wesley-Jessen Co. of Seattle for the missing girl. One of these lenses had been made for her twelve months prior to her demise, and the other six months prior to death. The prescription of the lenses taken from the body compared almost exactly with the prescription of her ophthalmologist, Dr. Lellelid. The manufacturing tolerance for magnifying power of these lenses is 0.125. Wear and exposure to heat will change certain factors in contact lenses. Factors which are changed most by wear and tear, as well as heat, are the base curve and the bevel. These are the factors which actually differed most between the prescription and the lenses found in the deceased. The right lens removed from the body had an identifiable manufacturer's mark bearing the capital letter W, and examination of the left lens under ultraviolet light revealed a fluorescent J. These manufacturer's marks were most helpful in identifying who made these particular lenses. The lenses from the body were finally studied by the actual technician who made them and in his opinion identification was certain.

TABLE 1—Comparison of optician's prescription with lenses removed from the body.

	Dr. Lellelid's Prescription	Lenses Taken from Body
<u>Right Lens</u>		
Color	Light green tint	Light green tint
Manufacturer's Mark	Dark green dot	Dark green dot
Base Curve	7.45	7.51
Size	8.6-mm dia	8.6-mm dia
Bevel	0.4	0.5
Power	-4.75	-5.0
Thickness	0.0055	0.0060
<u>Left Lens</u>		
Color	Light green tint	Light green tint
Manufacturer's Mark	Fluorescent J	Fluorescent J
Base Curve	7.58	7.50
Size	8.6-mm dia	8.6-mm dia
Bevel	0.4	0.5
Power	-4.25	-4.0
Thickness	0.0055	0.0058

Case 3

A man was in the process of excavating in his basement so that he could put in a new stairway. The excavated soil revealed the presence of a considerable quantity of bones and a few small fragments of badly decayed, disintegrated cloth. These were brought for examination. The skull was well preserved, having a bitemporal diameter of 12.5 cm and an occipitofrontal diameter of 18 cm. Fragments of rotten cloth resembling those from a burlap bag were attached to the left malar eminence. The skull cap was split by a large

fracture produced by a through-and-through bullet wound of entrance and exit. The entrance was at the junction of the right parietal and temporal and frontal bones immediately above the xiphoid process. It measured 9 mm in diameter. Fragments of bone from the inner table around the bullet wound of entrance were missing. A large fracture extended from the bullet wound of entrance across the entire length of the frontal bone. The bullet wound of exit was in the left temporal bone. Here the hole was much larger and fragments of bone were missing from the outer table of the skull. The defect measured 3 cm in diameter. Both the upper and lower jaw were present and a few fillings as well as missing teeth were noted, permitting the recording of a dental chart which could be helpful in personal identification. The pelvic bones bore the configuration and measurements of a male. There was an 8-mm rounded hole resembling a bullet hole penetrating the left fifth rib anteriorly. Measurements of the long bones indicated that the deceased was approximately 5 ft 5 in. tall. The size of the bullet holes, as well as the amount of damage produced, indicated that he was probably shot with a .25, a .257, or a 30-30 caliber rifle. Examination of the bones led to an opinion that they were those of a muscular individual whose occupation was probably that of a laborer. X-ray examinations revealed that he was within the age group of 30 to 45 years of age. Based on experience with previous exhumations, it was my impression that the body had been buried at least ten years before it was discovered. No maximum limit could be placed on the length of time the body had been buried.

Armed with this information, the Police Department investigated all previous owners of the house. Twenty-seven years prior to the discovery of the bones, a woman had moved out of this house to another house within a two-block radius. She had a son who was in Korea serving in the Army. She had had, according to neighbors, a common-law husband who supposedly had left for Alaska about the time she had moved from the home. Interrogation of the son in Korea revealed that when he was six years old he remembered his "father" coming home one evening quite intoxicated and beating his mother, who sent the son to the closet to get a rifle. He also remembered that his mother had shot the man and that the two of them buried the body in the basement. On the basis of this investigation, the deceased's name was obtained and final identification was made by the dentists who had performed dental work for the decedent. This case illustrates how identification was made on observations from a pile of human bones which had been buried for a period of 27 years.

Summary

Three cases illustrating how homicides were solved on the basis of unusual physical observations are presented. In all three instances the perpetrators of the homicides were apprehended and tried. These events may well not have transpired except for the minute observations which led to identification of each of the three victims.

Reference

[1] Larson, C. P., "Venous Air Embolism," *American Journal of Clinical Pathology*, Vol. 21, No. 3, 1951, pp. 247-250.

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