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MEDICO-LEGAL INFERENCES FROM A CASE OF DEATH DUE TO MULTIPLE PHYSICAL INJURIES

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One of the most entangling problems demanding urgent solution from both the legal and medical professions is the manner of using and rendering medico-legal expert aid to the administration of justice, particularly in criminal cases. Men who have invested the full energy of their life in the prosecution of crime in its various ways are agreed that a medical expert is the most important auxiliary of a criminal investigator, and in some way or other, is the only last resort within the means of the law to unravel the mysteries of crime. In spite of this fact, however, opinions are still divided as to the legitimate value and significance of such aid, one side of which is as vindictive and bitter in its denunciation as the other is outspoken and passionate in its praise.

The fundamental truth is that all that is said against the testimony of medical experts is directed not against the beneficence of the help of such experts towards the interpretation of barren phenomena of crime, but against a defective way of appreciating, exacting and correlating such help with the abstract purposes of the law and justice. In other words, the fundamental defect lies in the improper way of dealing with this kind of medico-legal subjects. Knowledge on the part of the lawyer or investigator as to how, upon what, when and on whom questions must be propounded; how to enlist the interest of the medical expert and how to understand his limits, are but few of the rudiments of an effective working system in order that both the lawyer and the physician can best marshal their talents for a substantial result.

The following medico-legal report on a case of a supposed murder which occurred in Manila on September 9, 1925, and which was referred to the Department of Legal Medicine of the University of the Philippines, for autopsy, reports and comments, may show the role which the medico-legal expert may play as auxiliary to public crimes investigators:

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Preliminary Examination

The body was that of an adult male Persian, fairly nourished and constitutionally weak, appearing to be of fifty (50) years of age, measuring one hundred sixty-four (164) centimeters in height and weighing forty-five and ninety-five hundredths (45.95) kilograms.

It was found lying on its back on a cemented floor with its head toward the west and with the face and neck, particularly the left side heavily stained with blood. There were three lines of already dry stains of blood on the left side of the face and forehead, running almost parallel to each other towards the left and originating from the wounds located at the right fronto-zygomatic region, and at the right side of the lips. The left arm was in semi-flexion with closed fists and placed at the left hip, while the right hand and fingers were extended, with the dorsal surface heavily stained with blood and placed over the stomach region. Both legs were completely extended. Within a radius of 80 centimeters at the left side of the head and neck and of the left shoulder, the ground was found heavily stained with dry blood in coalescing spots and dark-brown in color, forming a contrast with the greater amount of still fresh, recently coagulated blood, red in color, which, originating from the portion of the floor covered by the body, was flooding by gravitation toward the east side of the premises. The amount of blood observed on the ground and on the garments of the victim may be reasonably calculated to be three (3) liters.

The deceased was wearing a white shirt and a white undershirt, khaki trousers, leggins and shoes. The collar was detached from the front button and both ends thrown back to the ground, while the necktie was lowered towards the base of the neck and remained hanging and tied around the neck with the knot undisturbed and turned slightly towards the left, with its free ends in the left axilla. The outer surface of the shirt was more heavily stained at the level of the left shoulder, left arm, and left side of the chest. The rest of the outer surface of the shirt and of the higher portion of the trousers were lightly stained, in isolated patches in the front part, while the back portion of the same was completely drenched with blood due to the contact with the bloody ground. Both the leggins and the shoes, including the sole of the latter, were free from blood stains. A bloody electric flat iron was found by the Secret Service at about three (3) feet distant from the left side of the cadaver.

External Examination

Postmortem rigidity was complete, hypostatic lividity almost absent and the body was pale in general, while greenish discoloration was beginning to appear on both sides of the abdomen. The pupils were equally dilated to five (5) millimeters; both eyes were slightly open; the mouth was closed with the lips gaping, and the whole face expressionless.

The following external signs of violence were observed:

(1) A superficial lacerated linear wound at the superior posterior right parietal region, twenty-two (22) millimeters in length, directed parallel to and at a distance of eight (8) millimeters from the median line. The depth of this wound involved the whole thickness of the scalp.

(2) A similar lacerated linear wound at the left occipito-parietal region, measuring six (6) millimeters in length with its depth involving also the whole thickness of the scalp. This wound was nine (9) centimeters distant from wound No. 1, and its course was obliquely outwards and downwards, almost parallel to the left occipito-parietal suture.

(3) Another superficial lacerated linear wound behind the left mastoid process (behind the ear), with its longer diameter parallel to the left ear, and measuring one (1) centimeter in diameter.

(4) Three contiguous, small, elongated, contused-lacerated and punctured-like wounds of one (1), three (3) and four (4) millimeters in diameter, from left to right, respectively, surrounded by an irregular contused area, sixteen (16) millimeters in diameter, and located at the right lower portion of the frontal region, ten (10) millimeters above the right extremity of the right eyebrow.

(5) A transverse linear bruise running across the right temporal region, eight (8) centimeters long, with its widest portion measuring five (5) millimeters, extending from the anterior end of the helix of the right ear just above the right tragus and terminating immediately over the external third of the right eyebrow, three (3) millimeters from the lower side of wound No. 4.

(6) Two contiguous small elongated contused lacerated and punctured-like wounds, one, four (4) millimeters in diameter, located just laterally and below the external canthus of the right eye, and another, five (5) millimeters in diameter, seven (7) millimeters from the same point, both surrounded by an irregular contused area, three (3) centimeters in diameter, more

heavily marked over the right molar bone (upper part of the right cheek).

(7) An extensive but relatively less ecchymotic, purely contused wound covering almost all the lower half of the right face including the right side and the lower border of the chin, more heavily marked along the lower portion of the right lower jaw, and along the right external boundary of the mental region.

(8) A vertical contused lacerated wound, dividing the whole thickness of the right side of the upper lip, two (2) centimeters from the median line, at the level of the superior right first premolar, continuous to another similar contused lacerated wound, one (1) centimeter long, dividing in an oblique outward direction the right side of the lower lip at the level of the right canine tooth and of the right first and second premolars. The corresponding gums were lacerated but the teeth were firm.

(9) A long, deep, single, cut-throat wound with clean edges, running across the antero-lateral and superior portion of the neck, from a point two and a half (2-1/2) centimeters to the left of the median line at the superior border of the neck, (corresponding to the outer border of the insertion of the left stylohyoid muscle) towards the median line at the level of the superior border of the thyroid cartilage, (Adam's apple), and ending slightly obliquely downward to the right side at a point eight (8) centimeters from the median line and seven (7) centimeters above the base of the neck (at the level of the outer border of the middle portion of the right sterno-cleido mastoid muscle). By joining the skin at the borders of this wound, placing the head and the neck upward and in straight position, the course followed by it externally exhibited an undulated direction describing a stretched, horizontal letter "S" from left to right of the cadaver, i.e., a continuous line with two almost equal curvatures, the left half with its concavity downward and the right half with its concavity upward. The summit of the left curvature corresponded to the upper border of the thyroid cartilage (Adam's apple). The structures involved in the cut which has produced this wound were almost the whole soft parts of the antero-lateral portion of the neck which, from outside inward, are the following: The whole thickness of the skin and the subcutaneous tissue; the platysma; the corresponding muscle of the neck; the left cornu of the hyoid bone; the cervical portion of the left facial vessels; the left upper border of the thyroid cartilage; the right internal jugular vein; the right common carotid; the larynx, and the oesophagus. The vagus and sympathetic nerves on both sides, (the nerves having control of the heart,

lungs and other thoracic and abdominal visceral organs) were not cut. At the left end of this wound the different structures were cut perpendicularly at the same level, indicating that the weapon was probably thrust perpendicularly at one stroke at this point, while at the right end the same structures were cut gradually at different levels, so that at the very end of the wound there was about five (5) millimeters extension where the superficial layer of the skin remained uncut, the latter indicating that the weapon probably came from within outwards, slightly tilted with the cutting edge upward. The thyroid cartilage (Adam's apple) was protruding from the gaping edges of this wound.

(10) Several bruises, irregular in shape, scattered at the dorsal surface of the right hand and fingers which exhibited the following characteristic peculiarities in their location: One two (2) centimeters in diameter at the wrist; another also two (2) centimeters in diameter at the metacarpal portion of the thumb; and one on each of the dorsal regions of the small, ring and middle fingers forming together a linear bruise almost equal in width to wound No. 5, running obliquely across the dorsum of the hand, with its origin slightly above the region of the metacarpo-phalangeal joint of the small finger and ending at the middle portion of the middle finger, indicating that they were inflicted by the same weapon at the same time and while the hand was extended.

(11) Several small abrasions at the anterior portion of the base of the neck, at both elbows and at the more salient surfaces of both scapular regions (superior part of the back).

All and each one of the above described physical injuries were found more or less clot bloody in character and exhibiting remarkable signs of previous and recent existence of vital reaction of the respective tissues injured.

Internal Examination

On section of the body there were observed a small amount of adipose tissue (fat), a natural lean constitution, a remarkable paleness of the muscles and an empty conditions of the blood vessels.

The heart was found slightly contracted containing a small amount of dark fluid blood. The left lung was bound by few fibrous adhesions to the lateral internal surface of the chest wall. (Signs of old healed pleuresy). Both lungs were collapsed (airless) and exhibited areas of excessive fibrosis, in their apices. The trachea and bronchi (wind-pipe) were found

containing some blood clots, probably aspirated from the cut-throat wound No. 9. The brain was found in normal condition with the exception of some slight congestion on its surface, and all the rest of the visceral organs were pale in color. (Signs of general anemia). The stomach contained a small amount of completely digested food.

No other peculiarities in the rest of the body, having some direct or indirect relation with the occurrence of death in the present case, had been observed.

Conclusions

From the foregoing necropsy findings, it may be reasonably inferred:

(a) That in view of the amount of blood loss, as indicated by the general paleness of the body and organs, the conditions of the heart and blood vessels, and the structures involved in the cut-throat wound and the amount of blood which has flown therefrom, H. S. I. died from syncope secondary to a profuse bleeding from the complete section of the largest blood vessels of the right side of the neck.

(b) That, judging from the nature and character of the cadaveric changes, the color and appearance of the blood stains, the cause and manner of death, and the condition of the stomach content, as above indicated and described, the period of time elapsed since the moment of death till the time of the performance of autopsy (1:00 p.m.) must have been about twelve (12:00) hours, and about four (4:00) after last meal.

(c) That, on account of the fact that all and each one of the wounds found in the body of the victim were clot-bloody in their character with remarkable indication of the pre-existence of vital reactions of the injured tissues, all and each one of the said wounds must be classed as antemortem wounds.

(d) That the wound No. 9 above described, because of its location, extent and degree, must be classed under the group of necessarily mortal physical injuries.

(e) That the wounds Nos. 1, 2 and 3 might be classified as dangerous to life for although not necessarily fatal, they might have caused the death either directly from concussion of the brain, or indirectly from secondary infection.

(f) That wounds Nos. 7 and 8 might be regarded as serious physical injuries on account of the relative difficulty of their healing and of the fact that they usually leave deformity them.

(g) That all the rest of the wounds described might be considered either as less serious physical injuries or slight physical injuries, dependent upon their respective degree and location.

(h) That, judging from the appearance, direction and location of the wounds and blood-stains, and the position and the attitude of the body, the wounds must have been inflicted by another or others, with some degree of defensive resistance on the part of the victim.

(i) That, judging from their nature, character and location, the wounds on the head, Nos. 1, 2 and 3, must have been successively inflicted with a hard blunt instrument while the victim was still in a standing position and the aggressor behind him, the different locations of wounds Nos. 2 and 3 coinciding with the instinctive turning of the victim's head towards the left.

(j) That the wounds Nos. 4 and 6, and probably also wounds Nos. 10 and 11, on account of their similarity, ought to have been inflicted with a hard blunt weapon having some salient points while the aggressor was in front of the victim, who might have been either still in the standing position, sitting, or already lying on his back on the ground.

(k) That wound No. 5 and those located in linear form at the dorsal surface of the fingers of the right hand might have been inflicted by two (2) different strokes with a long, narrow, blunt instrument, while the aggressor was also at the front and somewhat to the right side of the victim, the first directly and the second in the act of protecting with his right hand extended the part aimed at.

(l) That wound No. 8, due to its nature, character and location, might have been inflicted with the same weapon and in the same manner as in wounds Nos. 4 and 6.

(m) That, in view of the superficial character of the wounds inflicted on the head and face, and the appearance and character of the blood-stains found; the almost normal condition of the brain, and the uninjured condition of the vagus and sympathetic nerves on both sides of the neck (which have their controlling influence upon the heart and the respiratory functions), it might be presumed that the victim had been able to offer some degree of defensive resistance without spreading blood on the ground, neither from his body nor from his aggressors', and that the victim, after having been rendered dizzy and exhausted, but still conscious and able to shout and

to move actively, might have fallen on the ground before the cutthroat wound was inflicted.

(n) That, judging from the amount, appearance, character and distribution of blood-stains, both at the place of death and on the body and garments of the victim, together with the nature, character, direction and location of the wounds found, the cut-throat wound or the wound No. 9 was the last inflicted by a single strong stabbing and cutting at the same time with a sharp-edged and sharp-pointed instrument, while the aggressor was at the right side of the head, probably in a stooping position, and the victim lying prostrate on the left side with the head slightly turned upwards, and, because of its undulated direction, probably while the victim was attempting to overcome a greater force actuating against his limited resistance.

(o) That the circumstance of having the face covered with blood; the linear blood-stains from the smaller wounds of the right side of the face and mouth running by gravitation parallel to each other towards the left side, and the left side of the trunk with the corresponding place on the ground the only stained with blood, indicate, further, not only that the body was placed at the above mentioned left side position during the flowing of the blood from the respective wounds, but also that the left side of the head and face was touching the bloody ground, and that the body was given a push towards the right, causing it to lie on its back, once the victim was lifeless and after the active bleeding has ceased.

(p) That the extended position of the right hand and fingers on the stomach region and the bloody appearance of their dorsal surface, forming a contrast with the non-bloody appearance and closed fist of the left hand, indicate that at the moment of death the right hand was already made useless by previous injuries and kept across the chest when the body was still lying at its left side, while the left arm was more extended and the left hand grasping some non-bloody object.

(q) That the circumstance of having the collar of the shirt been found detached from the front button might indicate also the occurrence of struggle. On the other hand, the lowering of the undisturbed necktie towards the base of the neck and its being pushed slightly towards the left might had been due not merely to struggle but also to the insertion of its free ends in the left axilla, while the body was lying on its left side.

(r) That, judging from the fact that there were four (4) main kinds of wounds found on the different parts and regions of the body of the victim, viz; (a) Pure contused wounds, pro-

duced by blunt rounded instrument like the fist, such as those located at the lower jaw described under No. 7, (b) Lacerated and punctured-like wounds produced by blunt weapon with some salient points, such as those located at the right lower portion of the frontal region near the right eye, at the lips and other parts of the body, described under Nos. 4, 6, 8, 10 and 11, (c) contused lacerated wounds and linear contused wounds produced by a hard blunt long stick-like or rod-like instrument, such as those found at the top and back of the head, at the right temple and on the dorsal surface of the right hand; and (d) a long deep clean cut-throat wound produced by a sharp-edged and pointed instrument, such as that described under No. 9, it may be presumed that four (4) different weapons must have been used by the aggressor or aggressors.

(s) That, judging from the nature, character, depth and location of all the wounds found on the body of the victim, there was no one which could have been inflicted with the bloody electric flat iron for if such a heavy instrument was used with full force so as to produce the wounds actually found, there would have been necessarily a more deep and extensive laceration of the soft tissues, and fractures of the bones and teeth. The same instrument could have been used by the victim himself for defensive purposes with his right hand, but on account of the distended condition of the fingers and the linear abrasions indicating that the same hand was struck on its dorsal surface while extended, this presumption is unfounded unless this linear striking has been inflicted after the flat iron was previously dropped by the victim due to previous hitting at the right wrist. As to the possibility for the left hand of the victim to have held and used the same flat iron, particularly if the latter was left-handed, the contrast between the bloody condition of the flat iron and the absence of blood on the left hand of the victim indicates that such a presumption could only be held acceptable if done before the falling of the victim on the ground and the cutting of his throat.

(t) That, judging from the extent, nature, character and location of the wounds found, the loss of blood from the opened contused wounds was insignificant and without substantial bearing on the causation of death, and that the greater hemorrhage from the largest vessels cut caused the death instantaneously, for as the escape of blood from such vessels is, as a

rule, somewhat gradual at a probable rate of two hundred (200) cubic centimeters per minute, and as the amount of continuous and profuse loss of blood liable to cause the death of a healthy individual is more or less $2/3$ of the total amount of blood which in this particular case is calculated to be about three and a half (3.5) liters in total or over two (2) liters of loss, there would have elapsed about ten minutes interval between the infliction of the cut-throat wound and the occurrence of death.

(u) That, according to the fact that neither the shoes of the victim nor the ground around the place where the cadaver was found exhibited marks of blood in the form of foot-prints, and taking into account, furthermore, that the ground immediate to the body at the right side where the aggressor was probably located at the moment of the cutting of the throat of the victim was also free from bloodstains, it might be presumed that both the victim and the aggressor or aggressors had not stepped on any bloody place, either before, during or after the occurrence of death.

(v) That, taking into consideration the relative position of the assailed and the assailant as it is inferred from the conclusions (n) and (u), at the moment of the cutting of the neck of the victim, and the fact that the sectioning of the common carotid artery previous the profuse loss of blood would have naturally caused the spurting of blood with some degree of propelling force, it might be reasonably presumed that the spurting of blood could have stained the corresponding portion of the body of the aggressor, provided that he was stooping near enough and at the level of the cut artery.

(w) That the absence of the characteristic blood-stain on the clothes produced by the wiping of the bloody knife which most assailants in similar cases would have naturally done after cutting, might be explained by the possibility for the aggressor to have wiped the knife at the posterior part of the garment while the body was still lying on the left side, thus the corresponding mark produced could have been rendered unrecognizable on account of the contact with the bloody ground which has impregnated the back portion of the garment once the body was turned on its back.

(x) That, in view of the facts that the only mortal wound found was the last inflicted as it was inferred in Conclusion (n), the rest of the wounds above described were not only not mortal

but in their majority less serious and slight, and that there was a particular contused wound on the right side of the mouth, described under No. 8, it might reasonably be presumed that the first attempt on the part of the aggressor or aggressors was not to kill their victim, and that on account of the probable resistance offered by and possibly also because of the shouting of the latter, they might have been induced to inflict the lacerated wound on the mouth previous the mortal wound.