Original Articles.

TWO CASES OF MEDICO-LEGAL INTEREST.¹

BY J. G. PINKHAM, M.D., OF LYNN, MASS.

CASE I. Acute cerebral leptomeningitis following blows upon the head, with late development of serious symptoms and death thirteen days after the injury.

The history of this case is briefly as follows: C. M. a mechanic, aged twenty-two, came to this country from Denmark six years ago. After coming here he worked pretty steadily at his trade. For four years he was employed by the General Electric Company, of Lynn, leaving of his own accord in January, 1896, because he was given work, which, on account of a disabled left arm, he found it difficult to perform. During this time, his reputation for sobriety was good. He took beer occasionally, like many others of his people, but was never regarded as a drinking man. His home for two years preceding his death was with a married sister, one Mrs. S., a woman of intelligence and of excellent character.

On March 31st, being then, as usual, sober, M. went to West Newton to visit a married sister living there. The next forenoon, still sober, he went out to look for employment. On the evening of the same day he was in Boston, and in company with another man went into a Chinese laundry. While there a difficulty occurred, and he was struck on the head twice with a piece of soapstone by one of the Chinamen. Later, he was found in the street by a policeman. He was then bleeding from a wound in the head, and was thought to be very drunk. He was taken to a physician's office (this was about 10.30 P. M.), and his wounds were dressed. He was then put under arrest for an assault on the Chinaman, and then taken to jail. The next day, April 2d, he was tried, convicted and sentenced to one of the penal institutions of this city for thirty days.

Mrs. S., the sister, saw him in jail after the trial, on the same day. She says that his head was bound up, and that he complained of headache. She was not allowed an opportunity to converse with him freely, an officer being present who interrupted her whenever she attempted to ask him about the trouble with the Chinaman. He did tell her, however, that he was not at fault in the matter, the other man being the one who created the disturbance.

On April 3d he was sent to the reformatory and put to work. The physician there reports that on the next day, April 4th, he was seen at sick-call, and a small wound on the forehead, with one stitch in it, was dressed. Three days later the wound having completely healed, the stitch was removed.

On the 10th, having worked from his arrival up to that time, he complained of feeling "mean," and was admitted to the hospital for observation. On the night of the 10th he became delirious, his delirium resembling in every particular, it was said, that produced by alcohol. On the next day the delirium continued, and there was a marked rise in temperature. A consultation was held, and it was decided that the symptoms pointed to a complicating central pneumonia.

On the 13th he died; and the cause of death was returned as the delirium tremens and pneumonia.

¹ Read at the Annual Meeting of the Massachusetts Medico-Legal Society, June 9, 1896.

The body was taken to Lynn for burial, and the sister, who thought that justice had gone astray in this case, laid the facts before the city marshal. She complained because the young man's friends were not allowed an opportunity to see him before his trial and to assist in his defence, and also, because they were not notified of his serious illness in season for them to visit him before his death. She could not believe he died of delirium tremens, as she knew he was not an intemperate man. It was her purpose, she said, to appeal to the Danish Consul, as her brother was a citizen of Denmark, and ask him to make an investigation. The city marshal referred the matter to me, with the statement that he thought an autopsy advisable. Thinking that there was good ground for this opinion, I acquiesced, and made an autopsy, with the assistance of Dr. H. W. Newhall, of Lynn, on April 17th, four days after death. Below is given the official report of the autopsy in a somewhat abbreviated form:

Body well nourished. Rigor mortis everywhere present. Post-mortem lividity in the usual situations. The abdomen is moderately distended, and there is a greenish discoloration of the whole surface, the same extending up on the left side to the nipple, and backwards to the axillary line, where it is merged in the cadaveric lividity of the back. There is also some greenish discoloration in the intercostal spaces on both sides in front of the thorax. A reddish-brown liquid of offensive odor escapes from the mouth when the body is moved. There is a stellate scar of recent formation, a little more than one-half an inch in extreme width on the forehead, just to the left of the median line, under the edge of the hair; on the right of the median line, near the eyebrow, is a patch of greenish-yellow discoloration of the skin about one inch in vertical diameter and of variable width. The scalp divided and turned back in the usual way shows on the under side a patch of ecchymosis about an inch and a quarter in length by one inch in breadth, beneath the site of the stellate scar before mentioned; also some ecchymosis beneath the site of the discoloration lower down on the right. Calvarium removed. Dura mater somewhat congested, and adherent to arachnoid along the margins of the longitudinal sinus and elsewhere over and in the neighborhood of the Pacchionian bodies. Pia mater everywhere highly congested, with effusion of serum beneath the arachnoid, and grayish-white patches (collection of sero-pus) here and there over the whole convex surface of the brain. Left lateral ventricle contains about three drachms of turbid and bloody serum. The right lateral and the third ventricle contain bloody serum. The substance of the brain appears healthy, except that the *puncta cruenta* are more noticeable than usual, showing some congestion.

The thorax opened, shows the right lung normal in every respect, the lower part being very dark from hypostatic congestion. The left lung is pretty generally adherent to the walls of the chest. Adhesions easily separated, but not recent. There is a small amount of bloody serum in the left pleural cavity. Left lung more congested than the right, but it floats in water as a whole and in sections and crepitates everywhere on pressure, and exudes a bloody froth from its cut surfaces. There are some hard masses as large as good-sized peas in the root of the lung near the bronchus; all other organs healthy.

The lower end of the ileum was examined for evidence of typhoid fever, and none found.

Remarks.—It will be seen that the autopsy in this case excludes pneumonia as one of the causes of death. As the man can be shown to have been sober on the morning of the day on which he was assaulted, and for many days previous to that; as he was not an intemperate man, only occasionally taking a glass of beer, or something of the sort; as he showed no sign of alcoholic delirium for ten days after his arrest, it is safe to say that he did not have delirium tremens. And, furthermore, as he received two severe blows upon the head, it is not improbable that he was partially stunned, or dazed, by them, and that this condition added to the fact that his breath smelt of beer, might have given to the officer who arrested him and to the physician who dressed his wounds the impression that he was very much intoxicated. It may be stated here that one witness is ready to testify to the fact that shortly before the time of the assault, M. was not intoxicated.

It is not an uncommon occurrence for a concussion, so-called, of the brain, even of a moderate degree of severity, if neglected or improperly treated, to result in meningitis and in death, sometimes as late as two or three weeks after the injury.

Put now all these facts together—the assault on the 1st of April; the arrest, trial, confinement in jail for three days; the hard labor for seven days; an apparent absence of the proper treatment for a concussion of the brain; the final illness of three days' duration, the clinical history (meagre, as obtained, but significant) of general malaise, fever, delirium; the autopsy, excluding other causes of death, and showing a general cerebral leptomeningitis with purulent effusion—putting, I say, all these facts together, can we avoid the conclusion that the blows upon the head were the primary cause of death? If we reach this conclusion, what is now the legal status of the affair, in view of the fact that the matter of the assault has been adjudicated once, and the deceased condemned? There can be no doubt that the assault committed by M. upon the Chinaman was merely technical; the actual assault, the violence, was inflicted upon the deceased himself by the man upon whose testimony alone with that of his associate in business the conviction was secured. Can the case be reopened and the Celestial tried for manslaughter now that M. is dead by his act? These points, it is without doubt the duty of the authorities of the law to settle. The inquest has not yet been held.

CASE II. Diffuse hemorrhage of the pia mater occurring during sexual intercourse and causing sudden death.

Mr. H., thirty-eight years of age, married, a barber by trade, was found dead at 5.30 P. M., May 22d, in a room occupied by a woman of questionable character. On my arrival at 6.25 P. M., I found the body in bed underneath the outer covering, with no clothing on it except the two shirts ordinarily worn in the day-time. It was lying on its back near the middle of the bed, with face turned slightly to the left, and away from the wall of the room against which the bed was placed. The right leg was nearly straight and in line with the body. The left leg and thigh were semiflexed. The arms were lying by the sides. Face rather pale, eyes and mouth closed. There was no rigor mortis, and but a slight degree of post-mortem lividity. On the

glans penis and exuding from the urethra on pressure was some fluid resembling semen in appearance. Right testicle enlarged. No marks of violence to be found upon the body.

As the woman in whose room the body was found gave an unsatisfactory account of the affair, she was taken to the police station and detained to await the result of an autopsy.

The body was removed to the morgue, and an autopsy made on the same day, at 8.40 P. M., in the presence of the city marshal and Dr. C. C. Sheldon, of Lynn. On section of the body, the liver was found to be enlarged and fatty in appearance. The spleen was somewhat swollen and hard. The lungs, heart, kidneys, pancreas, intestines and bladder were healthy. The gastric mucosa appeared somewhat thickened; it was red in streaks and patches, and covered with a layer of thick, dirty-looking mucus. The large veins, and the cavities of the heart contained very dark blood, mostly fluid. On removing the calvarium and the dura mater the convex surface of the brain was seen to be very dark over the greater portion of its extent. The dark color was most noticeable on the left side, and here, especially over the anterior lobe, over the right middle lobe, was a relatively clear patch; and in this region the arachnoid was observed to be somewhat cloudy, and the vessels of the pia mater distended, enlarged and tortuous. The cause of the dark color was discovered to be an effusion of blood into the meshes of the pia. In the sulci everywhere, and at the base of the brain, this condition existed. In the lateral, third and fourth ventricles were thin, black clots, the blood in these situations having evidently escaped from the meshes of the pia because there it was subjected to a less degree of restraining pressure. The largest accumulation of blood in any place was around the medulla oblongata. The amount collected there was quite large—sufficient, as it appeared, to cause marked pressure upon the medulla. The brain substance was healthy in appearance.

Remarks.—This form of meningeal hemorrhage is said to be quite rare in adults, although not uncommon in new-born children. With so general a diffusion of the blood, we can hardly suppose that the bleeding took place from one point of rupture. The amount of blood was too great, and the time for its diffusion too short to admit of such a conclusion. On this point, it may be said that, from the best evidence obtainable, H. was alive and dressed at 3.45 P. M. He was found dead at 5.30 P. M., one hour and forty-five minutes later. At 6.25 P. M. the body had begun to show traces of post-mortem lividity, and the extremities were cold. In my opinion, the man had been dead at least two hours. This calculation leaves only forty minutes for the whole transaction, including undressing and the subsequent acts, and makes it certain that death occurred very soon after the hemorrhage began. From the wife of the deceased I learned that he had been drinking freely for a year or more. He had, however, she said, seemed to be in good health, and had had no recent illness, except an attack of vertigo, or something of the kind, about one week before his death. The alcoholism accounts, of course, for the fatty liver and the varicose state of the cerebral blood-vessels. From the position of the body when found, and other circumstances, it seems almost certain that the hemorrhage took place while the man was in the act of sexual intercourse, and that death,

as I have said before, speedily followed. We may account for the occurrence by supposing that the excitement attending sexual intercourse caused an intense fluxionary hyperemia of the brain, and that the dilated and weakened vessels of the pia, already in a state of chronic engorgement, were unable to bear the additional strain, and gave way at numerous points, causing the fatal hemorrhage. The suddenness of the death was probably due to the pressure upon the medulla by the large effusion around it. If it be allowable to assume that, owing to the pressure respiration was first paralyzed, the heart continuing to act for some minutes after breathing ceased, we may in this way account for the black state of the blood, death being due, in a sense, to asphyxia.

IDENTIFICATION OF A HUMAN SKELETON.¹

BY ROBERT BURNS, M.D., OF PLYMOUTH, N. H.

On the 15th of October, 1895, a resident of Landaff, N. H., while working in his cellar, found a skeleton. Suspicion of murder soon fastened upon one Milo Grey, who had once lived in this house, and whose wife had suddenly disappeared some four years before. This man was arrested and indicted, but shortly before the time set for the trial, he pleaded guilty of murder in the second degree — claiming first, that he killed his wife on September 11, 1891, which we know to be the date of the woman's disappearance; secondly, that the fatal deed was done by a push which sent the victim sideways from the carriage seat to the ground; that she struck on her head and never moved afterwards. I would call to your notice that the time which elapsed between the murder and the finding of the remains was only one month over four years.

This house in Landaff is a small, old, wooden structure, in size about thirty feet by eighteen feet. It is a long distance from any other habitation; is situated on a soil in which gravel predominates, and on a level spot, the land at one side of which slopes enough toward a brook some two hundred feet away, to ensure good natural drainage. Owing to the situation of the house, I think it unlikely that there would at any time be standing water in the cellar.

The house was originally built without a cellar, the foundation being of such stones as could be most readily found for the purpose, and gathered evidently with more reference to size than to shape, consequently the interstices of the so-called cellar wall were much larger and the interior was more exposed to the weather than would be the case under ordinary conditions.

The so-called cellar was really an excavation made at some time subsequent to the building of the house, within and smaller than the house area, and the usefulness would probably depend upon the thoroughness with which the common winter custom of "banking up" the sills and foundations was carried out. You will see that in an unoccupied house of this character the range of temperature in the cellar would be practically that of out-of-doors, and would therefore be much greater than would be expected without a full understanding of these conditions. It is also to

be remembered that the winters are decidedly more severe than those to which you are accustomed. As the body was only lightly or partially covered with earth and stones, it was fully exposed to all temperature extremes.

It was found upon inquiry that in the spring of 1892 a stench had been noticed by those passing the house, which was unoccupied at the time, and "two years later" when the house was again inhabited, the stench had disappeared but "after a rain when the house was closed a disagreeable odor was noticed on opening."

Enough of the clothing remained, though mostly merely shreds, to assist in the identification of the body. Several witnesses recognized a pin, a ring and some peculiar metallic buttons, which were found with the remains, and which also an old photograph in part reproduces. The right foot was still encased in an ordinary buttoned boot; within this the stocking was in much better preservation than the other textile clothing, and the foot was mummified, whereas the smaller bones of the other foot had to be recovered by sifting the soil.

The body was found lying face downward on the cellar floor. Upon the left side of the head, was a large fracture extending upward across the vault of the skull and backward to the external occipital protuberance.

When I first saw the skeleton — it had already been moved to Woodsville — the full number of bones had not been found, and the earth where the body had lain had already been spaded, so that we were obliged to carefully sift all earth, to a depth of six or eight inches in that part of the cellar, in order to find the small bones, and the very small amount of hair which we were finally successful in recovering. By this careful searching and sifting, the smaller bones were ultimately all found; but very little hair was found with or near the remains. When the skeleton came into my custody, shortly after this time, I found, among the *débris* attached to the bones, a small piece of scalp, with a number of brown hairs about an inch long, hairs straight and with cut ends. This hair was beyond question human hair.

When the skeleton was sent me, I was asked to examine it and to form an opinion as to the age, height and time since death.

I have already alluded to the cranial fracture, and the skull was also noticeable on account of the absence of the four upper incisors; and as the lower incisors were in normal position, and the lower jaw firmly articulated, the vacancy was marked and could be easily shown to a jury. From the disappearance of the epiphyseal lines, the condition of the sternum, sutures and teeth, the body was that of an adult.

In determining the time since death, the following points were noted: A good share of the interarticular fibro-cartilage had disappeared. The internal condyle of the left femur was almost wholly destroyed. This destruction began some two inches above the lower edge of the condyle and the bone was destroyed well down into the cancellous tissue, making it look as if the bone had been eaten. The remainder of the bone was in good condition and was not attacked in any way. The destruction took place above the articular surface of the condyle. The left zygoma had also disappeared, but presented the appearance of having been broken off. The ligaments of the right

¹ Read before the Massachusetts Medico-Legal Society, at its Annual Meeting June 9, 1896.