

latter part of the month it became very cold. On the morning of Jan. 31st I attended

CASE 7.—Mrs. W—, aged twenty-five years; disfigured with erysipelas nasi spreading to the cheeks; had seven rigors during labour, and chills the day previous; labour easy. Adynamic puerperal fever set in, and she died on the morning of Feb. 5th, the face looking horrible from the extreme blackness of the erysipelatous parts.

I saw no more of the disease, though occasionally alarmed by rigors following delivery, excepting an anomalous case which occurred to a Mrs. F—, who was delivered on the 1st of April, she having just recovered from fever. The woman did well for the first fortnight, but was forced to exert herself in her household duties, being unable to pay for a nurse. She sent for me on April 23rd, and stated that she had been out for a distance of two miles the week before, and had not been well since. The lochia had not ceased, and for some days she said that the discharge was very copious and disagreeable. She was then suffering from phlebitis, a phlegmon existing over the right elbow and hip, and she died on the 29th, having every symptom of puerperal fever.

In considering over the preceding cases, I think there cannot be any doubt that a contagious principle was generated by Mrs. H—, (the first case,) which was conveyed to my third case, and thus the puerperal fever was originated; and I cannot help thinking that the second case (convulsion) had some connexion with that of Mrs. H—. The third, fourth, fifth, and sixth cases show the contagious nature of the disease, and the seventh and last cases, also, that puerperal fever may be propagated either by direct contagion, or by atmospheric influence acting on those who may be predisposed to the disease. The prevalence of erysipelas at the same time, and the tendency manifested to it in the cases related, strengthen the opinion, that puerperal fever and erysipelas are the same disease, one being capable of producing the other. The symptoms presented by these puerperal cases evidenced that the disease was dependent on a poisoned state of the blood, and not in any particular organ. There were a small, feeble, and very rapid pulse, anxiety, and a sense of uneasiness about the heart, hurried breathing, cough; in some of the cases, purulent expectoration, and profuse sweating. Some were troubled with vomiting and purging; no tenderness of the abdomen, but on pressing the uterus, which was rather larger than usual, pain was produced. There was no swelling or tympanitis when death took place within the fourth day; but in those who lived longer, the abdomen began to enlarge a short time before death. The lochia was deranged, and occasionally scanty, and in one case retention of urine existed. The cases were distinctly of the adynamic kind, presenting signs of a violent shock to the whole system. With respect to the treatment of such a form, (not puerperal peritonitis,) I should be inclined to follow the advice of those who do not recommend bleeding. I tried it in two cases, but it did no good. I would assist nature by acting on the principle of elimination. A mild emetic might be serviceable at the commencement by unloading the biliary ducts, followed by frequent doses of calomel; for I believe the liver is the most important organ to call to our aid in expelling the poison, and it is probable, from its office as a depurative of the blood, that it presents a morbid appearance after death, and thus in various diseases, (cholera, for instance,) this has been said to be the cause, when it ought only to rank as the effect of the disease. Diaphoretics also might assist; Dover's powder I found useful in calming the patient, and relieving pain; indeed, every means of eliminating the poison from the blood might be employed, whilst at the same time the system must be supported by ammonia, wine, beef-tea, &c.

Hyde, 1848.

ON A CASE OF  
MECHANICAL INJURY OF THE KIDNEYS,  
FOLLOWED BY COMA, SUPPRESSION OF THE SECRETION OF UREA BY  
THE KIDNEYS, AND ITS ABSORPTION INTO THE BLOOD.

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IN consequence of death in general so speedily following the suspension of the excretion of urea by the kidneys, owing to its consequent quick absorption into the blood and poisonous influence on the brain and nervous system, it rarely happens that time is given for a practitioner to determine decidedly, both chemically and pathologically, that the comatose symptoms depend altogether on the non-elimination of urea by the kidneys. The following case, from the attending circum-

stances, elucidates this point so simply and fully, that I cannot refrain from putting it on record:—

On the 23rd of last September, Edward C—, aged eight years, in perfect health, while at play, was run over across the loins by a heavy truck. In two hours after the accident I saw him. He was then in a state of collapse, and my impression was, that some internal hæmorrhage was then going on, for he was blanched, cold, and pulseless. He complained of acute pain in the left lumbar region, which was very tender to the touch, spreading to both the inguinal and the pubic region. I gave him stimulants, and kept him warm, by which means, in the course of thirty-six hours he gradually improved; and he then passed a large quantity of blood with his urine, not having previously voided any urine since the accident. This was repeated several times during the next twenty-four hours.

I examined this urine and blood most carefully, but failed to detect the least particle of urea or urates in it.

My little patient became more restless; fever set in, with a pulse at 130; and the pain in the region of the kidneys increased, notwithstanding the application of leeches &c. But these symptoms, in the course of two days, were succeeded by coma; he could not be kept awake.

I now bled him in the arm, and reapplied leeches to the tender part. On examining this blood, urea was most distinctly detected in it, and in considerable quantity. The urine, at the same time, contained not a particle of urea, urates, uric acid, or albumen, and its specific gravity was only 1,005.

I got him under the influence of mercury as quickly as possible; as soon as its specific effect was apparent, urea gradually reappeared in the urine, and its specific gravity increased. By degrees the comatose symptoms subsided, and in the course of five weeks usual health was re-established. He continues quite well.

The mode of detecting urea in the blood which I adopted was the one recommended by Dr. G. O. Rees, ("On the Analysis of Blood and Urine, in Health and Disease," second edition, page 40), and which I will describe shortly, as some readers may not have that useful work in their possession.

The first quantity of serum analyzed was 400 grains by weight, which were evaporated to dryness over an open steam bath. I broke up the dry extract, added two ounces of distilled water, and digested it over a steam bath for an hour, occasionally supplying the loss of water; then filtered the digested fluid, washing the residue on the filter with distilled water, which I added to the mother liquor. I then evaporated the whole over an open steam bath, and digested the residue with eight times its bulk of absolute alcohol, at a gentle heat, for half an hour, taking care not to diminish materially the bulk of the fluid. It was then filtered a second time, evaporated to dryness, and dissolved in a little lukewarm distilled water, and again evaporated to the consistence of a thin syrup. I now added a few drops of nitric acid, and set it aside to crystallize.

Previously to adding the nitric acid, a very strong odour of urea was perceptible. On examining the fluid under the microscope, to which the nitric acid had been added, tabular crystals of nitrate of urea were easily perceived, commencing in appearance as transverse lines across the watch-glass.

On examining afterwards a larger quantity of serum, (600 grains,) a more considerable quantity of the nitrate of urea was observed.

Although the quantities of serum analyzed were, in both cases, small, undeniable proof of the existence in them of urea, in considerable quantity, presented themselves; there must, then, have been a large quantity of urea in the blood.

It was my intention to have ascertained the amount of urea in a certain portion of serum, but I was obliged, from existing circumstances, to suspend my examinations at this point.

It is well known that, in youth, the quantity of urea in the urine is much larger than in the adult, owing to the more rapid disintegration of the tissues. In this case, a considerable portion of that excretion must have been circulating through the system.

In the absence of an actual examination of the organs affected, it appears to me that the ramifications of the renal arteries, which form the external vascular portion of the kidneys, were ruptured by the accident, which would be followed by congestion and inflammation of the Malpighian bodies and tubuli uriniferi, thus preventing all real secretion, and merely allowing the watery part of the blood to percolate through the tubular portion of the organs.

Rotherham, February, 1848.

## DEATH OCCURRING UNDER THE INFLUENCE OF CHLOROFORM; AIR FOUND IN THE VEINS.

(FROM A CORRESPONDENT.)

MISS MARIA S—, aged thirty, of Desvres, near Boulogne, enjoyed generally good health; was treated, some months ago, for palpitations and chlorotic symptoms, without interruption of menses, which were relieved by steel. By the overturning of a cart, on the evening of Wednesday, the 10th of May, she received a wound from a piece of wood, in the back part of the right thigh, about three inches below the tuberosity of the ischium. She was seen on the following day by Dr. Gorré, Corresponding Member of the Academy of Medicine, Paris, and Surgeon to the Hospital of Boulogne, who removed a foreign body from the wound, and dressed it.

Some days after this, a medical man of the village was consulted for a tumour situated about four inches below the groin, in the inner and front part of the thigh, and corresponding to the seat of the original wound. This tumour suppurated and burst spontaneously, by a small opening.

On Thursday, the 25th of May, a fortnight after his first visit, Dr. Gorré was again requested to see the patient. He saw a necessity for opening the abscess more freely. Miss S— could not make up her mind to the operation, simple though it was; but, having previously heard of the effect of chloroform, she proposed, herself, that that agent should be employed. Dr. Gorré consented unwillingly, and returned the following day, furnished with a supply of chloroform, procured in Boulogne. Assisted by a practitioner of Desvres, and joined, during the proceedings, by a midwife, at half-past two P.M. of the 26th of May, he poured about a drachm of chloroform on a handkerchief, and applied to the mouth and nostrils of the patient, who was reclining on a bed. Immediately on the respiration of the vapour, the patient evinced agitation by moving the hands convulsively; this agitation quickly ceased, and she became motionless and unconscious, and the operator, thinking her in the necessary state of anæsthesia, made the incision he deemed requisite.

Dr. Gorré states that, after he had made the incision, he heard one or two deep and laborious inspirations, but seeing no further signs of returning animation or consciousness, he examined more particularly, and found every appearance of life being extinct. Caustic ammonia was then freely applied to the face and chest; cold water and cold air were directed against the face; the fauces were irritated; and artificial respiration was assiduously kept up with bellows. During an hour, a movement or pulsation was observed in the course of the jugular veins.

A judicial post-mortem examination, ordered to be made, was performed by Drs. Rouxel and Gros, of Boulogne, and the following are the principal particulars taken from their report:—

*Post-mortem examination, twenty-six hours afterwards.*—27th May, half-past four P.M.—Cadaveric smell perceived on entering the room; temperature about 65° Fahr.; windows open; forenoon sun had not been excluded. Body clothed in wearing apparel, as if that worn before the fatal event. Countenance placid, without the least lividity; large brown eschar covering all the right cheek, a semicircular eschar under each eye; eyes closed, cornea dim and shrivelled; lips slightly apart, showing white, regular teeth; no froth at the mouth. An appearance of turgidity of the neck suggested the question whether she had laboured under bronchocele, which was answered in the negative.

On being stripped of its clothing, the body showed no signs of emaciation—on the contrary, a certain degree of plumpness, and it was well formed. Alabaster whiteness of skin, mammae not much developed; region of sternum covered by a large, dry, brown eschar, as on cheek, said to have been caused by the ammonia. Turgescence of neck not perceptible after the body had been moved for the purpose of undressing it; dependent parts livid. Left inguinal region, and upper part of left thigh in front, livid with numerous varicose superficialæ, some of considerable size, and much darker than the intermediate cuticle, attracted particular observation; the corresponding region on the right side, the seat of the incision, less dark, and the veins less evident, probably from having been drained by the incision. The legs below the knee more covered with hair than is usual in females, excepting in some cases of chlorosis from protracted virginity. Abdomen much distended by gas. A clean-incised wound, three inches long, and penetrating the adipose tissue to the depth of three quarters of an inch, beginning about three inches below the

groin in the inner and front part of the thigh, and following the direction of the axis of the limb. On separating the lips of the wound, a portion of straw, an inch in length, the calibre of which was perfect, was found lying at the bottom of the wound, and easily removed. The original wound was situated on the inner and back part of the thigh, corresponding with the surgical incision; that wound was perforated, and admitted readily the forefinger to the second joint, about an inch and a half; the communication between this perforation, caused by a pointed piece of wood, and the counter-opening where the straw was found, had been doubtless formed by the latter body. Head: No congestion of the vessels of the integuments. On opening the cranium, the dura mater was natural in appearance, with very little congestion; longitudinal sinus empty. On removing the dura mater, the pia mater showed a little more congestion over one hemisphere of the brain than over the other; and through the transparent walls of the cerebral veins, abundant bubbles of air were seen to shift their place, interspersed with, and separated by, a pale red fluid contained in these vessels, but less abundant than the air. On carefully separating the continuity of these vessels, air bubbled forth. The substance of the brain was but little congested—a little more so at the base; veins and sinuses of that portion contained fluid blood of an inky colour, with much air, which bubbled forth freely when the vessels were divided; this was particularly remarked in the ophthalmic veins; no fluid was found in any of the ventricles. The cerebellum was somewhat more congested than the cerebrum. On opening the jugular veins, they were found to contain a great deal of air, and no blood.

Thorax: On opening the chest, the cellular tissue of the walls of which contained much fat, the right lung was found considerably collapsed, with old adhesions of the pleura; a considerable effusion of bloody serum in the cavity of that side. Left lung healthy, and less collapsed; both lungs free from congestion, excepting a little at the dependent and back portion, where, when incisions were made, inky, fluid blood escaped freely. No trace of tubercles in either lung; bronchial tubes free from obstruction.

On opening the pericardium, which contained an ounce or two of bloody serum, the heart was discovered considerably loaded with fat, large, flaccid, flat, like an empty bag, without the least appearance of elasticity, the walls of its different cavities evidently in juxtaposition; when these were laid open, they were all found quite empty; no valvular disease observed; walls of ventricles very thin, and easily torn. The blood contained in the large veins near the heart was quite fluid, and as black as ink.

Abdomen: Hollow viscera healthy, enormously distended with gas, which, when liberated, had the usual extremely offensive odour. Right lobe of liver more congested than left, and when cut, gave issue to much blood, inky, with air; the blood contained in left lobe less dark. Stomach contained a considerable quantity of half-digested food; intestines contained little faecal matter; bladder empty; uterus little developed. On opening the superficial (varicose) veins of the left inguinal region already alluded to, and the saphena and crural veins in the same situation, much ink-like blood, mixed with large bubbles of air, escaped, and continued to do so for a considerable time.

This inky colour and consistence of the blood corresponds with the description given in the Newcastle case, and in the animals on which experiments have been made by Mr. Wakley, jun.

But to what origin is to be attributed the air found in such abundance? Was it the effect of venous aspiration, of cadaveric decomposition, or spontaneous vascular emphysema occurring in articulo mortis?

The following are the conclusions drawn by Drs. Rouxel and Gros from the post-mortem examination made by them, and with which they conclude the report presented by them to the Procureur de la République.

“First. Miss Maria S— has not died from asphyxia properly so called, but in consequence of syncope produced by the suspension of the cerebral action and of the sensorial functions under the anæsthetic influence of chloroform; syncope rendered more readily fatal in her case by the abnormal organic condition of her heart.

“Secondly. The presence of an aeriform fluid in the venous system cannot be explained by the introduction of air into a vein of sufficient size opened during the operation performed in the thigh, for, on the one hand, this superficial incision could not reach any vein of considerable calibre; and, on the other, it has been established that it is only by veins near the