and insensible to light; the breathing was stertorous; there were convulsive movements of the limbs on both sides of the body. It was thought to enlarge the wound by a crucial incision, but this did not expose any injury of the bone. During the night, he had a series of convulsions, and died in the morning.

On post mortem examination, no injury to the bones was found, nor was there any extravasation above the dura mater; but a very large clot of semi-fluid blood was found in the arachnoid cavity, over the whole of the left hemisphere. This effusion did not extend down the falx, but caused rather abruptly at the distance of about half an inch from the longitudinal fissure. The veins running into the longitudinal sinus were much gorged with blood. The vessel which had given rise to the effusion sent forth, and pronounced to be, an effusion of fluid not a little sound sleep, but frequent drowsiness. The lungs were quite healthy; the respirations were sixteen per minute. The heart was quite healthy; pulse 90. The liver was healthy, a little below the average of size. The condition of the liver was not at all healthy; there was a pale, and faintly acid; its specific gravity was 1009. Heat and nitric acid precipitated albumen (a sixth of the bulk of the urine). The microscope was not used, because the diagnosis was quite clear without it. The skin was dry, sallow, and shrunken. Patches of purpura were present on the thighs and legs. The tongue was dry, and had a broad black stripe along the centre. The integuments were natural; not the slightest effusion of fluid could be detected in any part.

The diagnosis, given after waiting a few days to ascertain whether the albuminuria, with low specific gravity, was permanent and uniform, was chronic granular degeneration of the kidneys.

The progresis, at the same date, was—convulsions; coma; and death, at no distant period, from uremia.

Nausea and vomiting came to an end, and there was no indication that very little nourishment could be taken. The thirst became constant. The proportion of albumen began to increase, and the amount of urine secreted somewhat to diminish. It became distinctly alkaline. The largest deposit of albumen was a third of the bulk of urine. This continued to the last testing, about two days before death. A tendency to coma soon became marked. The pulse was irregular and feeble. The respirations were reduced to eight per minute. The speech was inarticulate, and the power of retaining fluids in the mouth was almost gone. This state continued for two days and nights, at the end of which a violent convulsion occurred, followed by an extraordinary revival of the nervous energy. The patient recovered, and his voice was heard. A change for the worse ensued in about forty-eight hours. Frequent convulsions supervened; coma followed; and death was not long delayed.

Post Mortem Examination. The thoracic and abdominal viscera were carefully inspected. Not a single indication of morbid action was found until we came to the kidneys. The liver was a little below an average size, and the surface was smooth; but the tissue of both organs was normal. The weight of the right kidney was barely two ounces; that of the left was a little over two ounces. When the investing membrane was peeled off (it was almost loosely attached), it was found that a small portion presented a mottled granular appearance, with several larger prominences of a greenish grey colour. On making a longitudinal section, it was found that the greater part of the tubular tissue was replaced by a greyish granular structure, combined with numerous deposits of yellow fat. A few only of the conical divisions with their papillae could be distinctly traced.

Remarks. It has long been observed by Dr. Christison and other writers, that dropory is not a necessary concomitant of Bright's disease of the kidneys; but the cases on record in which there has existed the same extent of chronic structural change in those organs, as in the present instance, without serious effusion at some stage or other, are few, as to justify me in having requested the protection of the preceding details in the Journal. There can be no question that, as a rule, dropory is the condition that leads to the first suspicion of renal insufficiency. In the present instance, even the occasional p puffiness that in the early stages is so constantly perceptible. The quantity of watery fluid regularly passed, until a few hours before death, was extremely small, and the kidneys were not extensively affected, and may account for the absence of local or general effusion. Another peculiarity was the state of the tongue. I am not aware that a singular black appearance of the centre of the tongue has been described in renal disease; but this condition has occurred in three cases that have recently been under my care.
The cause of the disease in the present instance was, probably, exposure to sudden changes of temperature with consequent irritation and loss of rest. The patient was continually super-intending balls, archery meetings, and fêtes of every description. She was in the habit of sitting in a cold bath every morning on leaving her bed. Nothing could be more likely to produce internal congestion than exposure to variations of heat and cold during the greater part of the night, then sleeping for two or three hours, and taking a cold bath in a state of weariness in the morning. There had not been any scariats or any previous affection of the skin.

The next point I would mention, is the alkaline state of the urine, which was several times noticed. On these occasions, however, alone did not precipitate the albuminuria, although adding nitric acid was well shown—a premonition that I have more than once seen overlooked in practice. The sudden restoration of the nervous power shortly before death has, doubtless, been noticed by those who have watched carefully the progress of albuminuria. In a former case that I attended, the improvement in all the general symptoms was so great about three weeks before death, that I should have been completely deceived had not the persistence of the albumen led me to discard all minor indications, and adhere to my original prognosis.

TREATMENT. There is very little to be said about the treatment in this particular case. Before the purpura and debility were treated with tarperpine and other medicines; and, so far as the purpura was concerned, with decided benefit. The only additional indications that I noticed, were warm baths, which removed the weakness rendered senseless; small doses of calomel, to improve the secretion of the liver, which were so far successful; and soda water, with brandy and prussic acid, to allay the sickness. This latter combination gave great temporary relief.

I have only to add, that the brain was not examined, because it was wished not to proceed further than was required for the discovery of the cause of the symptoms and their fatal termination.

P.S.—If any of our associates can call to mind cases in which purpura, black tongue, and a shriveling condition of the spleen, have been co-existent with structural changes in the kidneys, I shall feel particularly obliged by their communicating the information through the medium of the Journal.

NOTES OF CASES OF GUN-SHOT WOUND.
By G. Navier, Esq., Assistant-Surgeon, Central India Field Force.
[Continued from page 610.]

CASE V. Gun-shot Wound of the Ankle-Joint: Amputation: Recovery. Private Fitzgerald, aged 23, 3rd Bombay European, was brought into the hospital of his regiment with a gun-shot wound received in front of the Ankle, the latter being the outer side of the foot, to the ball of the great toe, and secured with a bandage, leaving the wound open, to which water-dressing was applied. From his inability to bear the least pressure on the outer part of the foot, it was impossible to use an outer splint.

No change took place until April 7th, when the wound was observed to be increased in size, with florid edges, and a greenish colouem slough in the centre. It was somewhat painful; but there was great tenderness about the outer malleolus, which was somewhat red and swollen. Three dozen leeches were applied to the part, and afterwards a poultice.

April 8th. The swelling was less, and he had not so much pain.
April 10th. Leeches were again applied, which produced relief.
April 13th. The wound was so far better that water-dressing was resumed.
April 14th. He was sent, with the remainder of the wounded, to the Field Hospital, where he came under my care. He soon began to complain of great pain about the joint, for which no relief could be obtained; and it became aggravated at night.

April 19th. After a consultation, it was resolved that the limb should be amputated; which I accordingly did the next day. A good deal of blood was lost. At the end of examining the foot after its removal, the ball was found to have perforated the lower part of the tibia, leaving only a thin shell between it and the joint. A great number of co-existent portions of bone were brought away with the ball; and the cartilaginous surface of the tibia showed incipient ulceration.

The patient has progressed to this date (May 31st) without a single complaint.

CASE VI. Gun-shot Wound of the Clavicle. This injury occurred to a sepooy of the 25th Regiment, N.I.; the bullet striking the clavicle about three-fourths of an inch from the sternum, and emerging above the scapula of the same side. To Dr. Stewart, in medical charge of the regiment, I am indebted for the opportunity of witnessing this case, which I did on April 14th. At the period of my visit, the ends of the bones could be distinctly seen, about an inch and a quarter apart from each other, and presenting no abnormal appearance. Dr. Stewart informed me that he had removed three or more pieces of bone from the wound, which had been received on April 9th. No attempt was made to dress the wound; and a bandage was applied; water-dressing. On the departure of the regiment, on April 26th, for Culpee, the patient was sent to the Field Hospital. In the course of the following week, a manifest enlargement of the wound was perceptible in the ends of the bones; and, a few days later, an arch was thrown out below the level of the clavicle, connecting these ends together. A like deposit had also taken place on the other side of the clavicle; and on May 12th, when I saw this patient with the field-surgeon under whose charge he was, the greater part of a bony ring had formed, a deficiency of about half an inch being present at the upper part towards the neck. Again, the 32nd of the month, I found no further change, except that the size of the wound was much less, and a small piece of bone had become sufficiently detached to be removed with the forceps. On measuring the distance between the sterno-clavicular articulations, and the acromion process of the scapula of each side, the right or wounded clavicle gave an excess of half an inch over its fellow.

CASE VII. Shell-Wound of the Clavicle. I may mention a case of a more severe injury of the clavicle, involving nearly its outer half, which has been under my care since May 1st, at the Civil Hospital. The patient, aged about 10, was wounded in the course of the siege by a fragment of a shell, which struck him in the shoulder, inflicting a fearful wound of the soft parts, and comminuting the bone. On examination, I found a fragment of the clavicle, of no more than a third of an inch, comminuted to the size of a small piece of bone, and separated by a space of fully three inches between it and the remaining bulk of the clavicle. This latter portion, at its outer part, where it was exposed for half an inch in the wound, was splintered in two places; and closely stuck to it, by the connective tissue of the piece of the clavicle, of the size of an almond. The treatment consisted in supporting the elbow, and confining the arm to the side; applying only water-dressing to the wound, which was very healthy. A few days ago, I removed a piece of bone, and other small portions will be sufficiently loose to admit shortly of their extraction.

In this, as in the previous case, a large bony arch, similarly situated below the line of the clavicle, and comminuted below the skin, was found to have been formed for the support of the injured parts. In its outline, it was somewhat irregular; and the bony material became less marked towards its presented end. This bony deposit was not found extended out only from the sound part of the clavicle—none from the splintered portion; and, on tracing the arch towards its outer extremity, it was found to be connected with the acromion process of the scapula. The part is progressing favourably, and the wound closing. 

CASE VIII. Gun-shot Wound of the Forearm: Death from Secondary Haemorrhage. On April 16th, the medical officer in charge asked me to see a case of wound of the forearm by a musket-ball, which was still lodged. The wound, situated on the anterior surface, about its middle, was of considerable extent, and admitted a foul unhealthy appearance. There was much loss of skin. Secondary haemorrhage had taken place the previous night, which was mainly arrested by a tourniquet to the brachial artery, and the application of several

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