although the excretion by the kidneys remains approximately within the normal limits.²⁹ Not only is uric acid then found in the blood itself, but also in the morbid transudations. In the pleuritic effusion from acute pneumonia or tuberculosis; in the ascites from cancer, or cirrhosis of the liver, and from the various changes in the kidneys; and in the fluid of ovarian cysts and hydroceles in decrepit individuals—in all of them uric acid has been detected even in considerable quantities.³⁰ The greater part of it has doubtless been brought there; some of it may have formed *in loco*, as was plausibly argued by Dr. Ord,³¹ perhaps by the action of a ferment upon the leucocytes, as suggested by von Noorden.³²

All the elements, the combination of which generally leads to transudations rich in urates, exist in full force in the case of gout. There are, on the one hand, a leucocytosis of polynuclear and small lymphatic corpuscles, as also disintegration of the tissues and various organs which tends to an excessive formation of uric acid; there are, on the other, chronic myocarditis, fatty infiltration or similar degenerative changes of the cardiac muscles which conduce to its retention. Hence from the inflammatory serum which bathes the decaying and dead parts of and around the joint, the specific contents are precipitated, so that the uratic deposits are an epiphenomenon, and not the cause of the gouty paroxysm.

CASE OF ENCYSTED STONE IN THE BLADDER, WITH RUPTURE OF THE CYST, PERITONITIS, AND DEATH.

By WILLIAM ROYDEN, M.A., M.R.C.S., L.R.C.P.,
Burgh St. Margaret, Great Yarmouth.

A RETIRED tradesman, aged 64, had suffered from hæmaturia on and off for nearly ten years. He had no real pain, and, to use his own expression, "if he had not seen the blood in his urine he would not have known that he suffered from any bladder trouble." The blood appeared suddenly, lasted for some days, and disappeared suddenly, and recurred perhaps four or five times in a year.

In September, 1894, I saw him for the first time, and sounded him, but detected no stone. The bleeding had then been going on for a week, and finding after a few days it still persisted and that he was steadily losing flesh and strength, he was visited by Mr. Cadge, of Norwich. At this time the urine had become offensive, it contained a fair amount of dark blood intimately mixed with the urine, but no coagula, very little albumen, no muco-purulent deposit, but small gritty particles of phosphatic matter were discovered. Mr. Cadge sounded, but found no evidence of stone, only a hard smooth bladder, and slight enlargement of the prostate, but not enough to impede the use of instruments. The bladder was washed out with warm water. Three or four weeks after this the patient was seized with sharp pain, and voided a small piece of phosphatic concretion. The pain subsided, but recurred in a short time, and again he passed some phosphatic grit and was relieved. His general health gradually improved; he left his bed, and was able to walk out. The urine became clear and healthy, with only now and then a little blood. In October, however, pain at the end of the penis and vesical tenesmus came on, and persisted for several weeks. Then ensued the fatal seizure. I was suddenly called, and found him in a state of collapse, unable to pass any water, with distended abdomen and all the signs of peritonitis. I passed a soft catheter, and drew off only a little very offensive urine, and tried to wash the bladder out with a few ounces of boracic water, but none returned. His collapse increased, and he died in a few hours.

The necropsy showed acute peritonitis; the bowels were glued together by recent lymph, and there was a quantity of offensive fluid—apparently urine and serum mixed—free in the abdominal cavity. The bladder was flaccid and empty, the muscular walls were of average thickness, the mucous

membrane was rather dark in colour. The examination was made under difficulty, and I was not allowed to remove the parts. With the finger, however, the interior of the bladder at first felt smooth and empty, but presently I detected at the lower fundus a small sac with a communication which admitted the tip of the finger unwillingly. In this sac were a quantity of concretions, the largest of which was about the size of a marble; this was composed of white phosphates, loosely compacted into a stone, and had no uric acid nucleus. The sac was apparently composed of mucous and peritoneal coats only, and at its bottom was a round hole through which the urine had escaped to set up the fatal peritonitis.

REMARKS.—The occurrence of encysted stone would not by itself call for special notice, but I have never seen or heard of spontaneous rupture of a portion of the containing sac. Mr. Cadge tells me that he has repeatedly observed fatal peritonitis, the starting point of which was the thin walls of a sac which contained foetid urine—urine which was probably not regularly changed, and which eventually produced inflammation and even sloughing of the mucous and serous walls of the sac. But he has never seen actual perforation with the escape of urine into the peritoneal cavity.

NOTE UPON A FORM OF CATARRH FOLLOWING RESIDENCE ON THE SUMMIT OF BEN NEVIS.

By A. CAMERON MILLER, M.D. EDIN.,
Fort William, N.B.

THE meteorological observatory on the summit of Ben Nevis was definitely equipped and "staffed" in October, 1883, since which time a regular rotation of officers has been established at intervals of every three months or so. The staff complement ordinarily consists of three individuals, two of whom are engaged in taking and recording observations, the third being told off chiefly for culinary and household work. All three are, as a matter of course, exposed to the rigours and inclemencies of the climate on the top of the mountain, and are thus subject to conditions that, *prima facie*, might be expected to favour the occurrence of catarrhs and inflammations. But experience shows quite a different result. The observatory staff while in actual residence on the summit has been remarkably free from all kinds of ailments during the eleven years that have elapsed since the opening.

The subsequent residence at low level, however, renders the members of the staff peculiarly liable to an affection which they have accustomed themselves to designate as the "Ben Nevis cold." This closely resembles, in most of its features, what we are in the habit of recognising as an influenza catarrh. The attack generally commences in about forty-eight hours after the patient has taken residence at the low level. First, feelings of shiveriness are experienced, followed by *malaise* and disinclination to exertion of any kind, stuffiness of the nasal passages, sore throat, hoarseness, sometimes cough, coryza, and occasionally tenderness of the conjunctiva and lachrymation. The temperature does not show much disturbance; usually it does not rise above 100° in the evening, although the symptoms become aggravated in the afternoon. Gradually, for a period varying from ten days to three weeks, the patient gets rid of the objective symptoms of the attack. During the whole period he feels uncomfortable and disinclined for work, and this condition persists for some time after the coryza has disappeared. One attack does not seem to have the least protective influence, as recurrences take place in the same individual time after time, but intermissions do occur. Post-primary attacks may be as severe as a primary attack, and an attack following upon one month's residence on the summit may be as severe as an attack following the usual three months' residence. The period of the year seems to exert no special influence, summer attacks being quite as severe as those noted in winter. Certain individuals of the staff seem to be more susceptible than others; and an individual suffering from an ordinary cold at the low level, on mixing with the staff in residence on the summit, almost surely infects them with

²⁹ Von Noorden, *op. cit.*

B. Naunyn, *Über die Chemie d. Transurate*, etc. Reichert and Du Bois Arch. f. Anat. und Physiol., 1865.

St. Thomas's Hospital Reports, 1872: On the Relation of Gout to Uric Acid

³² *Op. cit.*

catarrh, which, however, seldom endures longer than twenty-four hours.

The history of the interesting condition here sketched points with little doubt to germ influences in the lower atmosphere. At the summit of the mountain organisms do not exist, or, if they do exist, only in innocuous numbers. At the low level they relatively thrive, and, seizing upon the "virgin soil" of a renewed and susceptible mucous surface, they set up the irritative and mildly toxic phenomena described.

In a paper read before the British Medical Association in 1889 the present writer pointed out that, under certain circumstances, advantage might be derived from high level residence in the treatment of tuberculous conditions; and the subject of this note he considers to have a bearing on his views.

TWO CASES OF RAPIDLY SPREADING GANGRENE OF THE UPPER AND LOWER EXTREMITIES : AMPUTATION : RECOVERY.

By J. TERRELL WILLIAMS, M.R.C.S., Etc.,

Senior Honorary Surgeon, North Lonsdale Hospital, Barrow-in-Furness.

MR. R. JONES's interesting case, published in the *BRITISH MEDICAL JOURNAL* of November 3rd, 1894, has induced me to report two cases recently treated in the North Lonsdale Hospital.

R. W., aged 53, of somewhat intemperate habits, fell while under the influence of drink and dislocated his shoulder (not for the first time). The condition of the shoulder was not discovered until the following morning, when the local doctor reduced the dislocation by manipulation. Within a very few hours the hand was cold, shrivelled, and dark in colour, and deprived entirely of feeling. On admission to the hospital on August 21st, three days after the injury, the hand was black, cold, and shrivelled, at intervals up the forearm and arm, and on the pectoral muscle and in the axilla were large purplish black spots, covered with bullæ containing black fluid. Pulsation could be felt high up in the axilla, but not in the radial or brachial artery. The patient was unwilling to have the arm removed at this time; however, after a few days' delay the condition of general gangrene became so marked that he was even anxious to be rid of the offensive odour and pain in the shoulder, which had become very severe. I removed the arm at the level of the insertion of the deltoid. He made an excellent recovery. The artery was firmly plugged from the axilla down to the hand; the veins were uninjured.

W. D., aged 26, was admitted on July 12th. Seven days earlier his thigh had been crushed between buffers. At the time his doctor did not think seriously of the case, so little mark was there of severe injury, and there was no fracture of bone or lesion of skin. As is usual in this district poultices were freely applied for two or three days, when it was noticed that the leg had lost all sense of feeling, had become black, cold, and covered with huge bullæ, and exhaled a most offensive odour. On admission to the hospital the limb was evidently in an active state of putrefaction up to 3 inches above the knee. The general condition also was most desperate. The temperature was 104° F., the pulse very weak, and the face had a most anxious expression. However, I determined to give him the chance of removing the limb. This I did high up in the upper third of the thigh. He made a rapid recovery, and left the hospital on August 13th. Both popliteal artery and vein were ruptured just below Hunter's canal.

REMARKS.

I have never before known gangrene follow luxation at the shoulder, notwithstanding the fact that I have seen a great many such injuries, and not rarely have had to use considerable force in their reduction. As I have mentioned in this case, neither the knee nor heel was called in to help in the reduction. In the second case, it is rather remarkable that bone and skin escaped injury while both artery and vein were ruptured. Very little blood had escaped, although the rent in the artery was fully half an inch in length, while the vein was torn open for fully 2½ inches.

I may here relate the sequel to a case in which the superficial femoral was tied for popliteal aneurysm, and the external iliac for aneurysm of the femoral on the same side. The case was reported in the *BRITISH MEDICAL JOURNAL* about two years since. I have since tied the femoral in the same patient on the other leg for popliteal aneurysm, about twelve months since. He made an excellent recovery, has been at work ever since, and is now in good health.

I wish to place this case on record, as I should imagine there are not many cases in which a man has survived the ligation of three principal arteries.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

SUICIDAL GUNSHOT INJURY.

A CASE of determined suicide which occurred here recently presents two remarkable features, which may prove interesting to some of your readers.

A. R., aged 38, a powerfully-built man, standing fully six feet, shot himself twice with small cartridge shot from a sporting gun. In the first instance he placed the barrel quite close to his left side nearly at right angles with his body. The charge penetrated the abdomen, 4¼ inches below the left nipple and 2 inches to the inner side, smashing the seventh and eighth ribs. The charge mainly buried itself in fatty tissues of the neighbourhood. A probe passed through the wound, led down about six inches in the direction of the transverse colon and stomach. The skin all around the wound was charred. No immediate fatal effect following, the man proceeded to load the gun with another similar cartridge. This time he placed the muzzle of the gun in his mouth, and is believed to have pushed down the trigger with a long clay pipe. The roof of the mouth was blown away. The malar bone and zygomatic arch were completely shattered, and the left side of the face likewise blown away, making an enormous wound. The brain was completely disorganised, and all the cranial bones on that side smashed into some twelve or fourteen pieces, which were lying more or less quite loose in the cerebral cavity. Although the terrific force succeeded in producing such terrible destruction, it nevertheless failed to produce any external lesion of the scalp. The whole scalp covering the calvarium was intact, there being an utter absence of external injury beyond that already mentioned on the left side of face, although the cranial bones on that side and in front were so freely broken up and loose. Neither was there any *contrecoup* wound on the right side or back from the first shot on the left side, which although very severe did not prevent the man from loading and firing again. I believe the case in some respects to be unique.

Through the courtesy of my friend and neighbour, Dr. Forrest, I was permitted to make the examination and send this report.

THOMAS P. HARVEY, M.D., L.R.C.P.Lond., etc.
St. Leonard's-on-Sea.

TRANSVERSE PRESENTATION IN CONTRACTED PELVIS: PODALIC VERSION: DELIVERY BY FORCEPS.

ON December 14th, 1894, at 8 A.M., I was called to Mrs. M., aged 42, in labour with her twelfth child. The pains had come on about 2 A.M., and the membranes had just ruptured. Examination showed the os nearly fully dilated, a shoulder presentation in the right acromio-anterior position, and prolapse of the left arm and a loop of the cord into the vagina. Podalic version was effected without delay, the trunk and limbs delivered, and a loop of the cord liberated. The uterus contracted, but the head refused to pass the brim. It became fixed; the cord was pressed upon; inspiratory efforts were made by the child, and the funic pulse ceased. Vigorous traction was combined with suprapubic pressure, and kept up for nearly half an hour, but without avail. The head remained fixed in the brim. A basilyst was sent for, but, whilst awaiting its arrival, the idea occurred to me to swing forward the trunk of the child out of the way, and put on forceps on the head. This was done, albeit with great difficulty. The head was compressed, and delivery effected in a few minutes with comparative ease. The placenta followed in ten minutes; the uterus contracted firmly, and there was practically no hæmorrhage. The uterus was syringed out with 1 in 5,000 corrosive sublimate. There was no rise of temperature, and the patient made an uninterrupted recovery.

Her history as regards previous labours was significant. She had been married over twenty years, and in that time had had twelve children. The first six labours were all easy, and apparently normal. The seventh and ninth were difficult, and called for turning, but the child was in each case born