right side, and he complained of severe cutting pain in the right hypochondrium, which was tender on pressure, and somewhat fuller than the left. A tumour, about the size of the palm of the hand, was found to occupy the lower part of the right hypochondrium and upper part of the iliac region; it was smooth, firm, and elastic, with a defined circular border, on the left side, but on the right the margin was more irregular.

Opinion at that time differed as to the nature of the tumour, some thinking it probably hydatid, growing from the under surface of the liver, others that the kidney was implicated. About the beginning of October, he began to suffer from rigors and perspirations, which were excessive at night; his temperature rose to 99.5, his pulse to 90. The tumour increased a little in size, and became more painful.

These symptoms continued off and on until October 28th, when they became greatly aggravated. The rigors became more frequent and severe, as did also the nocturnal sweats; the pain became worse, and his appetite failed. On the following day, he complained of scalding sensation accompanying micturition, which became very frequent. His urine was found to be turbid, of a pale yellow, nearly white, colour, depositing, on standing, a yellowish sediment; specific gravity, 1014; reaction faintly acid. Pus-cells were found to be present, also some very large cells, most of which were round or oval, though some had processes. Each of those cells was nucleated, and contained large brilliant nucleoli; crystals of triple phosphate were also present. The appearance of these large cells led to the belief for a short time that the tumour was of a cancerous nature, the kidney, in all probability, being the seat of the disease. During the next two days, the tumour decreased in size, the pain diminished, and large quantities of pus came away in the urine.

On November 1st, he again experienced very severe paroxysmal pain along the course of the ureter, and the right testicle became retracted. On the 2nd, he was suddenly seized with difficulty of micturition. An instrument was introduced to relieve him, and, after the urine was drawn off, the bladder was sounded, and a distinct click of a calculus heard. The tumour now began rapidly to decrease in size, large quantities of pus passing through the urethra.

On the 11th, the tumour had nearly disappeared; the urine was slightly turbid, containing only a few pus-cells and triple phosphate crystals.

On the 17th, the tumour had entirely disappeared. The urine was quite clear, but contained a few pus-cells; his general health was good; he slept and took his food well, but occasionally suffered from slight shooting pains in the right hypochondrium and slight frontal headache. The bladder was occasionally examined, the sharp click of a calculus being always present.

Little change took place in his condition from the latter end of November to December 16th. He was most anxious to have the calculus removed; and the general opinion was that, if the operation of lithotomy were to be performed at all, it should be done at once, though the case was grave and unpromising. It was not suited for lithotripsy, on account of the hard nature of the stone.

The lateral operation was decided on, and performed in the usual manner, occupying four minutes, some delay being experienced in finding the calculus on entering the bladder. The calculus resembled the pointed end of a gum elastic bougie, having been apparently moulded by the ureter. It was partially increased by a phosphatic deposit, the remainder of the surface having a polished coppery, metallic lustre. It measured $1\frac{1}{2}$ inch in length, and was one-third of an inch in diameter. It was composed of uric acid.

His temperature fell after the operation to 98.7, and he progressed satisfactorily till December 26th, when intense febrile symptoms set in. No cause could be found for this, as the condition of the wound was satisfactory, healing from the bottom, and urine passing through it. He now steadily lost ground; his appetite failed; he became greatly emaciated; the temperature varied from 102 degs. Fahr. to 104 degs. Fahr., and the pulse from 100 to 130.

On the morning of January 4th, 1874, he expressed himself as feeling somewhat better. His pulse was 100, and his temperature 101 degs. Fahr. Towards evening, his symptoms became greatly aggravated; he had several rigors; his temperature rose to 103, his pulse to 104, while his respirations were 44 per minute. For the first time since the operation, he now complained of slight tenderness over the site of the original tumour, but there was no pain on deep pressure. On the 5th, he was much worse; the rigors had recurred, and most profuse diarrhoea and perspirations came on. He lay on his back with his legs drawn up, though there was still no pain on deep pressure; his abdomen became tympanitic, and he gradually sank, expiring at 10 P.M. He was conscious to the last.

POST MORTEM APPEARANCES.—*Abdomen*.—There was a quantity

of sero-purulent fluid in the peritoneal cavity. Flakes of recent lymph coated the coils of the intestines and other viscera. On separating the coils from the right lumbar region, a purulent collection, situated at the upper end of the right kidney, was set free. *Kidneys and Bladder*.—The right kidney was coated with thickened lymph externally; its measurement after dissection was 8.9 inches in length by 4.3 in breadth. On section, it was found to be excavated with sacculi, no normal texture remaining. One very large sac, about four inches in diameter, projected from the upper end. The walls of this were thin, and in two places had become perforated, hence inducing peritonitis. The infundibulum of the kidney was enormously dilated; the mucous membrane of the ureter was thickened, granular, and vascular. All the coats of the ureter were greatly thickened to nearly half an inch in diameter. Six inches from the kidney, the ureter was occupied by a calculus; above, it was pouched. This pouch contained two more calculi, and measured one inch and a half in circumference. At the lowest calculus, there was a ring of ulceration three-eighths of an inch in depth, and with a very unhealthy aspect; hence, from the kidney downwards, the ureter was pouched as far as the impaction of the lowest calculus. In the pouch and sac of the kidney there was purulent fluid. The left kidney was congested, otherwise normal. The bladder was comparatively healthy. The wound of the operation was closed and healthy throughout.

THE RELATION BETWEEN ARTERIAL TENSION AND ALBUMINURIA.

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I HAD intended to be present at the reading of Mr. Mahomed's paper at the Royal Medical and Chirurgical Society, but unfortunately I was detained elsewhere. I have now read with much interest the abstract of the paper and the discussion thereon in the *JOURNAL* of May 2nd, and I beg permission to make a brief comment on one or two points.

Mr. Mahomed's clinical observations show that in certain cases of scarlet fever there is a condition of high arterial tension before the occurrence of albuminuria. This is believed by the author to indicate a poisoned condition of blood. I have always maintained that the albuminuria and the renal disease frequently complicating scarlet fever are results of blood-poisoning, and it is especially interesting to me to find in Mr. Mahomed's paper additional evidence in favour of that doctrine. But the statement that the albuminuria and the renal disease are due to "congestion under high pressure", appears to me questionable; and, if I could have been present at the reading of the paper, I should have asked the author for an explanation of his views on this point. I assume that the increased arterial tension is a result of contraction of the terminal muscular arterioles, excited by a morbid condition of blood; but I do not see how this arterial tension explains the albuminuria. We know that increased pressure on the walls of the Malpighian capillaries, consequent on the impeded return of blood through the veins, in cases of valvular disease of the heart, for instance, is a common cause of albuminuria; but undue contraction of the renal arterioles excited by morbid blood would tend to lessen capillary engorgement in direct proportion to the increase of arterial tension to which it gives rise. In the April number of the *Edinburgh Medical Journal*, Dr. Begbie has published a very interesting paper on the Association of Albuminuria with Vascular Bronchocele and Exophthalmos. Two of the cases whose histories are given in that paper, I had, through the kindness of Dr. Begbie, the opportunity of seeing. Dr. Begbie explains the albuminuria in these cases by the engorgement of the Malpighian capillaries, which results from a want of tonicity in the afferent arteries, the congestion being increased periodically by the afflux of blood which takes place after the ingestion of food. This explanation appears to me reasonable and intelligible; but the condition of the vascular system which exists in these cases of exophthalmic goitre is the exact opposite of that which Mr. Mahomed describes in the prealbuminuric stage of scarlet fever. In the one class of cases, there is diminished arterial resistance, and a consequent increase of capillary engorgement; while in the other there are increased arterial resistance and tension, and, *pro tanto*, diminished pressure on the walls of the capillaries. It is intelligible that albuminuria may result from engorgement of the Malpighian capillaries consequent on an impeded return of blood through the veins, or an increased afflux through unduly relaxed arterioles; but it is difficult to understand that albuminuria can be a direct mechanical result of increased arterial resistance and tension, and still more difficult to explain in this way the desquamation of renal epithelium and the other phenomena which occur in cases of acute Bright's disease.