

Section of Urology.

President—Mr. CYRIL A. R. NITCH, M.S.

PRESIDENT'S ADDRESS:

Renal Tuberculosis.

By CYRIL NITCH, M.S.

(ABSTRACT.)

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THE PRESIDENT pointed out that, as limitations of time would not permit of a complete review, he had selected certain aspects of the disease, some of which he knew were open to differences of opinion. The details he was bringing before the Section were based on complete records of sixty-five cases.

After referring to the clinical varieties and pointing out the differences between the medical and surgical forms, the paths of infection and the pathology of the surgical varieties were discussed in detail. Mr. Nitch inclined to the view that in a great majority of cases the path of infection was by way of the blood-stream, and that the primary lesion was situated in the cortex; thence it was carried to the base of the papillæ, where caseation and extension towards the pelvis gave rise to the well-known papillo-calycular ulceration. The treatment was early nephrectomy, combined in many cases with total ureterectomy. The results of nephrectomy alone, and of nephrectomy combined with ureterectomy, were summarized in three tables, which appeared to point to the greater benefit from the major operation. The late results were instructive, for twelve per cent. of the patients died two and a half years after the operation, fifty per cent. were cured, and ten per cent. still had urinary trouble.

In pleading for an early diagnosis Mr. Nitch pointed out the importance of regarding all cases of mild "cystitis" with suspicion, and of carefully examining a sterile, purulent urine for tubercle bacilli.

Discussion.—Sir JOHN THOMSON-WALKER said that a number of points in pathology had been raised that would give ample scope for discussion. He said that Mr. Nitch suggested that the earliest deposit of tubercle in all cases of surgical tuberculosis of the kidney took place in the cortex. This did not agree with the naked-eye observations that one made in specimens removed by operation. The earliest visible deposit was at the apex of a pyramid, and from this the tuberculous process spread outwards towards the cortex. A tuberculous collection might be found shut off from the renal pelvis and apparently isolated in the renal tissue. Careful examination would show that there had been a complete obliteration of the neck of a calyx, or of a division of the pelvis by the development and contraction of fibrous tissues. A condition short of complete obliteration might sometimes be seen when there was extreme narrowing at the outlet of the calyx with ulceration of the pyramid within. On a grand scale this occurred at the outlet of the renal pelvis, and it brought about what was known as the natural "cure" of renal tubercle by isolation of the kidney from the rest of the urinary tract. As the destruction of the pyramid proceeded outwards, small grey tubercles might be seen at the periphery of the ulcerating area. These outposts from the spreading margin might be visible at the periphery of any active focus of tubercle. They were well seen with the cystoscope in tuberculous ulceration of the bladder. They did not indicate a spread from periphery to centre but the opposite, and in the kidney did not prove a cortical origin of the tuberculous deposit.

The infection of the second kidney, by a spread down the lymphatics of one ureter across the bladder and up the lymphatics of the second ureter, had not, he thought, been proved. If a lymphatic route of infection to the second kidney took place there was a more direct path

by the intercommunication of the lymphatics of each kidney. But if the first kidney was (as most authorities held, with whom Mr. Nitch agreed) infected by way of the blood-stream, one would expect to find some difference in the gross pathology of the second kidney infected by way of the lymphatics. But the two kidneys were indistinguishable so far as this path of infection was concerned. In his (the speaker's) experience if the said cases were seen soon enough the diagnosis could be made at a very early stage. He had removed a kidney in which there was a single, very small tuberculous area at the apex of one pyramid. The difficulty was that the cases were not submitted to expert examination soon enough. Insufficient care was exercised by those in charge of cases of slight cystitis or passing hæmaturia. A more complete examination of such cases would lead to practically all cases being brought to operation in the early stage. This brought up two very interesting points in diagnosis : One was the value of the discovery of tubercle bacilli in the urine on one or two examinations without any other pathological elements, that is, without pus, blood, casts, or albumin. He (Sir John Thomson-Walker) had seen several such cases in which the problem of operation had arisen ; the tubercle bacilli had been undoubtedly present on one or two occasions, but were not discovered on subsequent investigations. His view was that in these cases the tubercle bacilli were excreted from some focus elsewhere in the body and that there was no tuberculous disease of the kidney itself ; no further sign of urinary tubercle had developed after several years. The absence of the tubercle bacillus in the urine in some cases of urinary tubercle was another important point. From time to time he had to diagnose urinary tubercle from the clinical signs or the cystoscopic examination when repeated examination of the urine by smears and animal inoculation had failed to discover the tubercle bacillus. Some were cases of "closed" tubercle of the kidney. The lumen of the ureter was obliterated and the kidney was completely isolated from the urinary tract, but in other cases there were tuberculous lesions in the bladder without bacilli in the urine.

In regard to treatment, the removal of one of two tuberculous kidneys was recommended in some cases. If this was done at all, it could only be justified in rare cases, when one kidney was the site of advanced tubercle and was causing severe local or general symptoms, and the other kidney was very recently and slightly affected. If cases of bilateral renal tuberculosis were followed up it would be found that, apart from intercurrent disease, death took place either from suppression of urine owing to the destruction of renal tissue, or from chronic toxæmia due to absorption of tuberculous toxin. Of these two, suppression of urine was the more common. It was generally agreed that tubercle of the kidney was a progressive disease, ending in all but the rarest cases in total destruction of the organ. By the removal of one of two tuberculous kidneys the second kidney was relieved of the irritating effect of excreting the tuberculous toxin, but at the same time a large amount of secreting kidney tissue was removed, and by so doing one hastened the time when suppression of the urine would take place without, as was generally admitted, anything being done to stop the process of the disease in the second kidney. In his (the speaker's) opinion, there were very few cases in which the removal of one of two tuberculous kidneys was justifiable. His practice in operating for tuberculosis of the kidney was to remove the kidney with the commencement of the ureter, below the lower pole of the kidney, and close the wound entirely. After six or twelve months, if it appeared that the ureter was the source of continued infection of the bladder, it was removed in its whole length by a median incision and extra-peritoneal dissection. The number of ureters that required to be so dealt with was very small. In the great majority of cases the ureter shrank and caused no further trouble.

Mr. S. G. MACDONALD said he considered that a disappointingly large number of cases were bilateral when they first came under observation ; this was especially so in children. He did not think cases in which the remaining kidney subsequently became tuberculous should be as common as the President suggested. He had had only one return case ; this occurred seven years after nephrectomy, and in the interval the urine was free from pus and tubercle bacilli. As, during the interval, the patient was operated upon elsewhere for a tuberculous abscess in the abdomen, it was possible that this was a case in which the second kidney became tuberculous *de novo*. He did not now do a nephrectomy until a guinea-pig had been inoculated from the second kidney. He agreed with Sir John Thomson-Walker as to the method by which an "open" could be converted into a "closed" renal tuberculosis ; this was supported by the appearance seen in a kidney he had removed, in which the upper half of the kidney was destroyed by tuberculosis and shut off from the urinary tract ; the lower half was healthy, so

that the patient had an efflux from both kidneys and the urine was free from pus and tubercle bacilli. Diagnosis in such a case depended upon the "dragged out" ureter found on cystoscopic examination. This occurred only in renal tuberculosis. The question whether tubercle bacilli could occur in the urine without urinary tuberculosis had been settled by Phillipowitz (*Wien. Med. Blätter*, 1888) from clinical and post-mortem evidence; the case cited by the President would appear to come under this heading, since no kidney had yet been produced showing healed tuberculous scars.

As regarded treatment of the ureter at the nephrectomy, he divided the ureter as low as could be done conveniently from the nephrectomy wound and he had found this sufficient. Sir John Thomson-Walker referred to cases diagnosed as tuberculous with the cystoscope, in which tubercle bacilli could not be demonstrated, and he (the speaker) had three such cases under observation at the present time.

CLINICAL AND PATHOLOGICAL MEETING.

Suprarenal Tumour, Carcinoma.

Shown by W. LANGDON BROWN, M.D., and W. GIRLING BALL,
F.R.C.S.

THE specimen is one half of the whole tumour, and shows upon its surface a portion of the suprarenal gland from which it has originated. Part of this remnant is clearly defined, and shows a well-marked border and a characteristic colour. Towards the lower extremity it broadens out and becomes attenuated, to be eventually lost in the general surface of the specimen.

The tumour as a whole is lobulated, and was easily dissected from the fat which surrounded it. There is no evidence of infiltration of the surrounding tissues. The surface is traversed by numerous large blood-vessels.

On the cut surface the outer portions of the tumour appear as a pale solid tissue, with dilated blood-vessels or small hæmorrhages here and there. More deeply the growth has broken down to form irregular shaggy spaces surrounded by degenerate tissue of an almost gelatinous appearance. In other places there are smaller degenerate areas of a more opaque appearance and brighter yellow colour.

Microscopic Examination.—Sections stained with hæmalum and eosin, and hæmalum and Van Gieson's picro-fuchsin. Two pieces were taken for section: (1) from the surface at right angles to the suprarenal remnant, and (2) from the cut surface in the depth of the tumour.

(1) The first shows the suprarenal remnant to be of normal structure. The normal gradually blends into a freer growing tissue, which resembles that seen in hypernephromata or suprarenal adenomata. Gradually the cells assume a more alveolar or grouped arrangement, sometimes with a blood-vessel in their midst. They stain more deeply, and in the more actively growing areas are less vacuolated. Considerable areas of necrosis are seen.

(2) In the second section there is no normal tissue. The growth appears to have a definitely perivascular arrangement, at first sight suggestive of endothelioma or epithelioma. The cells, however, are of the same type as those in the first section derived from suprarenal cortex, and so are epithelial and not endothelial in origin. Here and there are large areas (remote from the blood-vessels) which have degenerated.