genito-urinary tract, and hence in its diagnosis an examination of the prostate and the vesiculi seminales may be of use.

But the two points of importance in the differential diagnosis given by Hurry Fenwick* are, first, "the appearance of pus in the urine very soon after if not coincidently with the renal pain"; and, secondly, "the powerlessness of absolute rest to affect or subdue the symptoms." He also mentions the family history as a guide, but it is much inferior evidently to these indications. In renal calculus the stone causes pain from its presence before its irritation is sufficient to set up suppuration enough to cause a deposit of pus in the urine, but in tuberculosis the disease may lead to suppuration before tension is enough to cause pain. Again, in stone in the kidney movement, especially jerking movements, such as jumping or riding in a cart, will jerk the stone about and cause irritation in very sensitive renal structures, and thus cause considerable pain. There is nothing in tubercle to be aggravated by movement of this special kind.

In any case in which we are in doubt between renal stone and renal tubercle, we should certainly examine the urine for tubercle bacilli, but in urine they are only found with difficulty. We have seen an erroneous diagnosis of renal tubercle made on the presence of bacilli, which were very like tubercle bacilli, but did not take the stain quite in the characteristic way.

After a time in a kidney affected with renal tubercle the ureter may get blocked by caseous deposit, and then the pelvis becomes distended with pus, and can be felt as a round tense, tender swelling. It may burst in the loin, or open into the colon.

Often the diagnosis can only be made by an exploratory nephrotomy. If no stone is found and the case is one of tubercle, we may do much good by this operation. As Fenwick says: "The lower ureter would be placed at rest, and the stream of irritating urine would be diverted. By splitting the capsule the intraglandular tension would be reduced, and the pain consequent on the backward pressure would be subdued."

Mr. Henry Morris, in his lectures on "The Surgery of the Kidney," published in the *British Medical Journal* of this spring (April 30th), relates the case of a young man who for a year had been suffering from pain in one renal region, with hæmaturia, and passing pus in his urine. Renal calculus was diagnosed by one surgeon, and the question was only finally decided by an exploratory nephrotomy. However, the kidney was found so diseased it was removed. But removal of the kidney or nephrotomy is not recommended as the best treatment in cases of tubercular disease, as so often the other kidney suffers also. Possibly at the time of the operation the affection of the other kidney might not have given rise to symptoms, and yet the disease might have begun and developed later on. When both organs are extensively diseased vomiting is a frequent symptom.

There is another condition to which we wish now to refer, which sometimes simulates renal calculus—we allude to renal malignant growths. In their earlier stage, before they form palpable tumours, they often cause symptoms closely resembling renal calculus. The lumbar pain, the often profuse hæmaturia, the renal colic when the ureter gets blocked by a clot, are all also prominent symptoms of stone. The pain and hæmaturia are, however, like the same symptoms in renal tubercle, and, unlike stone, not increased by exercise. But this is not always so. We have lately had under observation a patient in whom hæmaturia due to cancer of the kidney was distinctly increased by exercise. He had typical renal colic at times, and his kidney was explored, but no stone was found. After the operation a tumour

formed, which was palpable through the abdominal wall, and at the post mortem, some months after, the organ was found greatly enlarged by carcinomatous growth. It certainly contained two calculi in one greatly dilated calyx, but they were black soft concretions which could be broken down on the slightest pressure of the finger-nail, and were quite small—both put together not larger than a pea—and evidently formed from the blood-clot in which they were lying.

Even when renal carcinoma or sarcoma forms a swelling which can be felt, it is not always possible to distinguish this swelling from a pyelitis. It may be just as smooth (as it was in the case just referred to), but would not be so distinctly tender, nor would there be a purulent deposit in the urine, increased by the occasional emptying of the distended pelvis, but if the ureter were completely blocked by a calculus, neither would there be any purulent discharge in a case of calculus pyelitis.

(To be continued.)

THERAPEUTICS.

PHENOCOLL HYDROCHLORATE.

This substance, the nature and properties of which we described recently in these pages, has been used for rheumatism, malaria, and as an antipyretic. It shares with ordinary phenacetin a reputed exemption from injurious after-effects. Ott, indeed, was able by injection into frogs of two-grain doses to bring the heart to a standstill in diastole, and in rabbits a fall in blood pressure and in the pulse rate followed injection of large doses; but Kobert and Von Mering claim that it is practically harmless to animals, and no ill effects in human beings appear to have been discovered. One of its most recent applications has been in the treatment of malarial fevers, where it is claimed to have a therapeutic action exceeding in some cases that of quinine. Albertoni states that he was not merely able to cut short the attacks by its use, but even to effect a permanent cure in twenty-four out of thirty-four cases in which he employed it. He gave fifteen-grain doses several hours before the attack and continued the administration once a day for a short time. It appears to have some power in relieving the pains of rheumatism, apart from its action on the temperature; and from Ott's experiments, this action is probably due to its direct influence on the spinal cord. According to Dr. Hertel, it succeeded in some of those troublesome cases of acute rheumatism where salicylates have no effect, so far, at least, as the relief of the pains was concerned. A remedy of use in these obstinate cases is not to be despised, for at present we have no means of diagnosing that variety of acute rheumatism which is acted on by salicylates from those where it is inoperative. Possibly, these instances may depend on some failure of elimination, for at times the addition of a diuretic, such as scopolamine, to the salicylates will effect improvement. Fifteen-grain doses of phenocoll may here be given every five or six hours for 24 or 30 hours with benefit. The same amount as a maximum is employed for reducing high temperatures. The anti-pyretic power appears to be slightly greater than that of phenacetin, and twice as great as that of antipyrin. No collapse or sweats are said to follow its use, though the urine at times becomes dark brown. Like phenacetin, phenocoll is not very soluble, but the hydro-chlorate in water slightly above the ordinary temperature dissolves easily, and the taste can be masked by a little syrup. If further experience should bear out its claims, we shall have a useful alternative to the older remedies for hyperæmia, rheumatic and neuralgic affections.

* *British Medical Journal*, May 28th, 1892.