Original Communications.

RECENTLY OBSERVED FACTS RELATIVE TO THE PATHOLOGY OF THE PROSTATE.

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II.—TUMOURS OF THE PROSTATE.

UNDER this heading, I refer only to tumours which possess a so-called benign tendency. The prostate is liable to be affected by tumours of a cancerous kind, but these are very rare as compared with those now under consideration. It would be difficult to find above thirty recorded cases of undoubted cancer of the prostate; and a generalisation of the facts afforded by these, presents little which need be noted here. The simple tumours, on the other hand, are exceedingly common, as will be seen below.

1. *Simple Tumours.* The formation of small isolated tumours in the substance of the prostate is a circumstance very frequently observed when making dissections of the organ. They are of small size, ranging from that of a pea, or smaller, to that of a cherry; the latter size being rare. Their growth is slow; their consistence is firm; their structure closely resembles that of the prostate itself, especially the stromal or non-glandular tissue of the organ; their histological characters are altogether simple or benign, and wholly unlike those of any cancerous growths. Perhaps they are most commonly found in the lateral lobes, especially at their posterior extremities. Occasionally they are imbedded in the median portion, "middle lobe", whether this part is enlarged or not. Sometimes they appear just under the capsule, and so spring from the surface, carrying in an outward direction the capsule as a covering, but nevertheless escaping altogether the contour of the gland, and looking almost like an independent or outlying formation. Occasionally they are really "outlying"—i.e., separated by an interval from the prostate itself. A space of half an inch has been seen to intervene between such a tumour and the adjacent gland; a narrow line of duct, with other vessels and a little tissue, alone connecting them.

Their existence is important, practically speaking, in one point of view. While a prostate which is simply hypertrophied may become largely so under certain conditions, without affecting materially the functions of the bladder or urethra, and causing little or no obstruction to the outflow of urine, one of these small tumours developed at the neck of the bladder may produce almost complete inability to micturate. The small, firm, rounded projection which it constitutes, fills up the internal meatus, closes it almost entirely against the natural efforts to relieve the bladder, and renders necessary the artificial aid of the catheter. At the same time, these circumstances existing, little or no enlargement of the prostate may be present or ascertainable by rectal exploration, and little or no difference in the length or the curve of the catheter is required for the case. These conditions, which are undoubtedly exceptional, I have nevertheless not unfrequently observed during life and verified after death.

Tumours of this kind do sometimes exist in non-hypertrophied prostates; but much more generally the reverse is the case.

Thus, among the 164 preparations of the prostate from

individuals at or over 60 years of age, which have been referred to in the preceding paper, in 57, isolated tumours were present, and easily demonstrable. In about one-fourth of these cases, the organ did not exceed the natural weight; they therefore do not rank with hypertrophied prostates. In the remaining three-fourths, tumour and hypertrophy coexisted. I have seen small tumours present, but producing no enlargement whatever, as early as 50 years of age.

We have thus a condition quite distinct from hypertrophy, but liable, like it, to produce obstruction to the outflow of urine, and chronic retention and engorgement of the bladder, in elderly subjects—a condition which requires similar management also, in all respects. The practical lesson is one which relates to diagnosis; and it is simply this, that we are not to affirm the absence of obstruction at the neck of the bladder, and infer the existence of paralysis affecting that viscus, when it is unable to empty itself by voluntary efforts, because we discover no enlargement of the organ by rectal or by urethral examination. The obstruction may be, and in these circumstances it not unfrequently is, due to the existence of a small rounded tumour developed in the substance of the prostate, but projecting considerably into the urethral canal, and usually, although not invariably, in or near to the situation of the uvula vesicæ.

I possess drawings of several examples in which great difficulty in passing urine existed during life, although the prostate was but very slightly hypertrophied; and the obstructing portion, which just filled the neck of the bladder, was not larger than a small nut. In some of these the obstacle was constituted by a small tumour, covered by a thin layer of prostatic tissue proper, from which it was turned out entire on making a section of the enveloping structures.

II. *Outgrowths from the Prostate.* These appear to stand midway between the isolated tumours and the general hypertrophy of the organ. The typical example is the so-called enlarged "middle lobe", when it assumes a pyriform shape, being attached to the prostate by a pedicle, and often projecting far into the cavity of the bladder. It is so well known as to need no further notice here.

FEVER IN THE ZAMBESI.

By DAVID LIVINGSTONE, M.D.

[Read before the Epidemiological Society, June 3rd, 1861.]

IN the typical cases given in Dr. McWilliam's *Medical History of the Niger Expedition*, the gall-bladder was found distended with black bile; and, if my memory do not deceive me, most of the cases treated with quinine at an early period of the disease either recovered, or were subjected to the milder or intermittent form of fever.

In 1850, I adopted the plan of giving quinine mixed with a purgative as the first step of the treatment, and was successful in the cases of two of my own children and an English party whom we found at Lake Ngami, and of whom one had died before our arrival. I have lost the notes of my reasons for adopting the practice; but I have been successful in every case I have met with since. The prescription employed is resin of jalap and calomel, of each eight grains; quinine and rhubarb, of each four grains. Mix well together; and, when required, make it into pills with the spirit of cardamom. Dose, from ten to twenty grains. The violent headache, pains in the back, etc., are all relieved in from four to six hours; and with the operation of the medicine there is an enormous discharge of black bile; the patient frequently calls it blood. If the operation be delayed, a dessert-spoonful of salts promotes the action.

Quinine is then given till the ears ring, etc. We have tried to substitute other purgatives instead of the resin of jalap and calomel; but experiments have only produced the conviction that aught else is mere trifling. No strength is lost in our march up the river of six hundred miles on foot. An European would be stricken down in one day, and the next after the operation of the remedy would resume his march on foot. In some very severe attacks, it was necessary for the patient to travel upon a donkey; but, after two or three days, he would prefer to tramp it.

We tried Warburg's tincture, which has a great reputation in India; but it causes profuse sweating, and does not cure the disease. The strength is also impaired. We had a good supply, by the kindness of one of our nobility; but I am compelled to say that it did not answer our expectations. The daily use of quinine is no preventive. We have seen many cases of fever occur when the person was on the verge of cinchonism.

I employed the foregoing remedy with success on the west coast; but made no fuss about it, more than make a general statement in the *Missionary Travels*. I was not quite sure that our fever was identical with that which Dr. McWilliam encountered in the Niger; but the melancholy fate of a party of missionaries at Linyanti, where six out of nine Europeans, and four native attendants, perished in the short space of three months, makes me fear that it is the same complaint as that which destroyed the officers of Commodore Owen in the Zambesi, those of Captain Tuckey in the Congo, and the crews of the great Niger Expedition in that river. My companions, Dr. Kirk and Mr. C. Livingstone, entertain the same idea of the value of our pills as I do. We wrote a paper for one of the medical journals. But the above sad case makes us anxious that the remedy should become more extensively known than it has been, and I do not know a better plan for effecting this than by communicating it to Dr. McWilliam.

Those who may try the remedy will do well to remember that the above doses are for strong adults.

I cured myself and native companions in this way during my long journeys between 1852 and 1856; and that the remedy has no bad effect on the system, may be inferred from the fact that I have had no regular attack of fever since my return. I have had little illnesses, probably from exposure to malaria in its most intense forms, but nothing like what I formerly experienced; and I am of opinion that what we were all taught, not to give quinine till we had used the preliminary measure of relieving the bowels, was a mistake.

Might the remedy not be applied to some of the fevers at home that arise in unhealthy localities? Around every village in this country there is a very large collection of human ordure during the dry season; this is swept into the rivers by the heavy rains; and you may guess the effect from hundreds of thousands of villages. The natives here do not drink the water as the natives do on the banks of the Thames, but make holes in the sand to draw from. Possibly this has as much to do with the origin of fever as it has at home.

I give a specimen of the difference between dry and wet bulb, Victoria Falls, 24th Sept., 1860.*

	Air.	Wet Bulb.	Difference.
In shade at 9 A.M.	87°	59°	28°
" 12 M.	96.5°	63°	33.5°
" 3 P.M.	96°	60°	36°+

The greatest difference Dr. McWilliam observed, was, I believe, 16°; generally it was 6° or 7°.

* The temperatures of the dew-point in the three observations respectively are, according to the formula of Glaisher, 42°, 50.2°, and 54°.—J. O. McW.

+ Once the difference was 40°.

Reports of Societies.

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MONDAY, JUNE 3RD, 1861.

GAVIN MILROY, M.D., in the Chair.

FEVER IN THE ZAMBESI. BY DAVID LIVINGSTONE, M.D.

A NOTE from Dr. LIVINGSTONE to Dr. McWilliam, on Fever in the Zambesi, transmitted by Captain Washington, R.N., F.R.S., Hydrographer to the Admiralty, was read by Dr. McWilliam. The note is published on the preceding page: it is dated from Tette, November 28th, 1860.

Dr. McWILLIAM observed, that anything coming from Dr. Livingstone was sure to command attention and interest; and that he therefore had had great satisfaction in bringing his brief communication before the Society. He (Dr. McWilliam) had not been in any of the rivers on the east coast; but off the coast of Mozambique, he had treated fever, which he found of a much more tractable nature than that which he had encountered on the west coast, more especially in the Niger. But, from what he had learnt from the traders at Mozambique, he feared that the rivers on the east coast of Africa were not much less inimical to European life than those of the west coast. The Zambesi was about 25° south of the Niger; but there seemed to be no defect of that important element in the causation of fever—heat—in the Zambesi, according to the daily meteorological observations which Dr. Livingstone had appended to his paper. The difference between the temperatures of the dry and wet bulb thermometers was far beyond anything he had met with in the Niger, and indicated an unwonted dryness of the atmosphere in the Zambesi. With regard to the treatment so successfully employed by Dr. Livingstone, the principle was of course not new, although he was not aware that the precise formula of that eminent traveller had hitherto been used, and as other purgatives than jalap, calomel, and rhubarb in combination with quinine, had failed in Dr. Livingstone's hands, it was desirable that the prescription which he recommended should have further trial. To this end, he (Dr. McWilliam) would endeavour to give it all possible publicity. Dr. Livingstone had alluded to the mortality in other African expeditions; and it might not be uninteresting to the Society that he (Dr. McWilliam) should briefly recapitulate the losses sustained in the expedition to the Congo in 1816; to the Zambesi from Captain Owen's ship, in 1828; to the Niger, under Laird, Lander, and Oldfield, in 1832; and to the Niger under Captain Trotter, in 1841-2. He should also state the mortality in the *Eclair* in 1845; and, although not in chronological order, the dreadful loss sustained by two detachments of soldiery at the Gambia in 1825.

Captain Tuckey, in H.M.S. *Congo*, entered the River Congo, on the south-west coast of Africa, in latitude 1° south, on the 6th July, 1816. His crew at this time consisted of—officers, 7; naturalists, etc., 5; petty officers, seamen, and marines, 40; natives of the Congo, 2; total, 54. After pursuing the voyage for some way up the river, a party of thirty proceeded on a land expedition beyond the cataracts of the river. Of this party fourteen died of fever, and four died on board the *Congo*, all within the space of three months. One man also died from the effects of river-fever, after leaving the river. Total loss, 19. Of 7 officers, 3 died; of 5 naturalists, 4 died; of 40 petty officers, seamen, and marines, 12 died; total deaths, 19.

Mr. McKerrow, the medical officer, describes the weather as pleasant; the thermometer seldom exceeding 76°, or being lower than 60° Fahr.; with scarcely any