ANEURYSM OF BOTH POPLITEAL ARTERIES: CURE BY LIGATURE OF THE FEMORAL ARTERIES

AT THREE YEARS' INTERVAL: DEATH FROM MALIGNANT DISEASE OF THE STOMACH THIRTEEN YEARS LATER:
DISSECTION OF FEMORAL VESSELS.

By SAMUEL GORDON, M.D.,

President of the Carmichael College of Medicine and Surgery, etc.

THE perusal of that most interesting Hunterian Lecture recently delivered by the President of the College of Surgeons of England, has recalled to my memory the particulars of a case which occurred many years ago in the Richmond Hospital, and which, as I believe, was never published. The following notes may possibly prove of some interest to the readers of the JOURNAL. Not the least interesting feature connected with it rests in the fact that the late Mr. Peile, who took great interest in the case, often told me, when examining it, that he was with the late John Hunter when he first tied the femoral artery for popliteal aneurysm; and, when he had secured the ligature and closed the wound, he turned round and said to Mr. Peile, "Now the absorbents are busy below, like mites in a cheese."

The patient's name was James Owen. In the earlier part of his life, he had been a herdsman and caretaker, and so exposed to cold and damp by day and night, and had a great deal of exercise on foot. At the age of 29, he applied to the late Mr. Todd, in the Richmond Hospital, for relief from an aneurysmal tumour in the left popliteal space. Mr. Todd, in the year 1817, tied the left femoral artery; and in a short time Owen returned home to the county Meath, able to resume his work as a herdsman, to which occupation he now added that of horsebreaker.

Three years after the first operation, he observed a similar swelling in the right popliteal space, and knew, from the similarity of the symptoms, that it was the same disease from which he had suffered in the left leg, and been cured. Accordingly, he returned to the Richmond Hospital, when Mr. Todd, in the year 1820, tied the right femoral artery, and he returned home, the second aneurysm being perfectly cured. He now enjoyed uninterrupted and perfectly good health for thirteen years, and continued at his work as herdsman, and occasionally breaking-in young horses. He had, in fact, recovered such perfect use of his limbs as qualified him for any species of labour. About the close of the year 1833, being then forty-five years of age, he was attacked with frequent vomiting and other very severe dyspeptic symptoms, and returned to the Richmond Hospital, convinced that another cure would now be effected for him. It was a great disappointment to him to find that Mr. Todd was dead; but he was admitted under the care of the late surgeon Adams, whose many clinical lectures on the various interesting points of the patient's history are still remembered by old Richmond Hospital students.

The dyspeptic symptoms steadily increased, and it was soon but too evident that he was suffering from malignant disease affecting the great curvature and pyloric end of the stomach. It was a very remarkable coincidence that, in the bed beside him, was placed a patient (Norton by name), who was suffering from malignant stricture of the cardiac orifice and the lesser curvature of the stomach; and to contrast the symptoms of these two patients was a matter of almost daily occurrence. The two stomachs are now placed beside each other in the museum of the Richmond Hospital, and the recent *post mortem* appearances are admirably represented in two drawings by Conolly. Owen gradually wasted, and became subject to uncontrollable diarrhoea; there was, at times, a distinct impulse conveyed to the cancerous tumour by the abdominal aorta, which was sufficient to impress the patient's mind with the idea that it was the same form of disease he was now afflicted with, as when he had the pulsating tumour behind his knees, and he, therefore, could not understand why he could not be again cured. He became frightfully emaciated, and died on April 3rd, 1836. Notwithstanding extreme vigilance on the part of his relatives, the indefatigable curator, the late Professor Smith, having abstracted the stomach and appendages, and secured, also, the lower half of the body, the abdominal aorta was injected, and the lower half of Owen's body was most skillfully dissected.

The following notes describe the condition of the ligatured vessels and the state of the collateral circulation.

On the right side, the femoral artery was tied, five inches from Poupart's ligaments, two inches and three-quarters from origin of profunda, down to which it was found obliterated. The profunda was much enlarged, and, besides its usual branches, gave one large

branch to the short adductors. The perforating arteries were also much dilated. One large branch from the middle perforating ran directly into a muscular branch of the femoral, which was given off in Hunter's canal, about one inch and a half above the origin of the anastomotica magna.

In the popliteal space, the artery was reduced to a cord, and contained no injection at the part where it lay on the posterior ligament of the joint. The inferior articulars and the recurrent tibial were larger than usual.

On the left side, the femoral artery was tied three and a half inches from Poupart's ligament, one and a half inches from the origin of the profunda, down to which it obliterated the descending and transverse branches of the external circumflex rose just above the ligature, from the superficial femoral; three-quarters of an inch below ligature, a large branch (of the size of the radial at its origin) ran into the adductor magnus; the termination of this seemed to anastomose with the perforating branches of the profunda, which were very large. The internal circumflex gave a large branch to the short adductor muscles.

In the popliteal spaces the injection stopped at the superior border of the ligamentum posticum Winslowii, and began against the inferior border of the same ligament. There were two superior external articular arteries, one of the size of the ulnar, anastomosing along the external lateral ligament with the inferior external articular, which was also enlarged.

There were masses of injection lying along both popliteal nerves. These came from a large branch of the first perforating artery.

The size of the branch from the profunda to the short adductors was rather remarkable on both sides. The terminal branch of the right and left internal circumflex was enlarged, and probably anastomosed with the sciatic. The anastomoses between the perforating arteries on both sides were very free. The left superficial femoral artery below the seat of ligature was larger than the right.

The preparation is now preserved, in good condition, in the museum of the Richmond Hospital, where the details given in the above description of the arteries of each thigh can be verified.

ON PICRIC ACID AS AN URINARY TEST.

By CHARLES HENRY RALFE, M.D., F.R.C.P.,
Assistant Physician to the London Hospital.

I HAVE just read Dr. Mahomed's letter which appeared in the JOURNAL of the 24th ultimo, relative to the question of the value of picric acid as a distinguishing test in the various forms of albuminuria, and Dr. Johnson's communication, which appeared last week, in reply. As the statement made by me at a recent meeting of the Pathological Society, with regard to the action of picric acid on peptones, has been introduced into the controversy, I should like briefly to offer a few comments on this interesting and important subject.

It appears to me that Dr. Johnson admits the point I brought forward at the Pathological Society, viz.: "Though these new tests—picric acid, etc.—are extremely delicate reagents for the detection of albuminuria, yet further tests are required in order to distinguish one variety of albumen from another; and that heat, and heat alone, can determine that the albumen present is serum-albumen, and not a modification or distinct variety." Since, in order to distinguish between the precipitate given with picric acid and sero-albumen from that of peptones, he says that, with the latter, the precipitate "was immediately and completely redissolved by heat below the boiling point," thus it is made clear that, in testing for albumen in urine, the test by heat must never be omitted. This also supports, I think, the contention raised by Dr. Mahomed at the Clinical Society.

With regard to the question of peptonuria, my observations do not coincide with those of Dr. Johnson that its occurrence is a "rare and exceptional phenomenon," since I have been able frequently to demonstrate the presence of peptones in many cases of temporary or intermittent albuminuria. The reason they are so often overlooked is due, I think, to the fact that they are usually associated with the presence of ordinary albumen; as is natural, since the presence of peptones in the renal vessels would render the blood-serum more diffusible. In testing these urines, it often happens then that serum-albumen being detected, no further search is made for peptones. It is, however, easy to demonstrate their presence, since they strike a peculiar rosy red with Fehling's solution in the cold, absolutely distinct from the mauve coloration the same reagent gives with any form of albumen. When peptones and albumen are mixed