and some promiscuous drunkards. Now, if we take all the forms of Bright's disease together, we find no very striking connexion between them and intemperance; but if we take, as here, the cirrhotic form alone, the relation is at once apparent. The cause assigned in 12 cases was the intemperance; in one of these, lead-poisoning co-operated with that cause; in another, gout. There was one other case in a patient not known to be intemperate, but whose illness was assigned to lead-poisoning. In the remaining seven cases, the cause was not known. It is further worthy of notice, that the three youngest victims of the disease were intemperate; and it appears to me probable that intemperance in early life specially tends to induce this malady.

It will be observed that I have not given heart-disease as a cause in any case. My reason for so doing is, that I regard the changes induced by passive congestion, in consequence of heart-disease, as distinct from those of true cirrhosis.

With regard to the mode of origin, it was in every case insidious. It never was marked in its early stages by dropsy and diminished urine, as is the inflammatory, nor by polyuria without dropsy, as is the waxy. Sometimes an apparently early symptom was frequent nocturnal micturition, but in a large number of cases there was nothing to attract notice until convulsion, or dimness of sight, or palpitation, or debility drew attention to the disease already well advanced. The quantity of urine was large in four cases; all of these were far advanced and had hypertrophy of heart; it was slightly increased in two; it was natural in five; and diminished in six; in three the quantity was not noted. In almost all the cases the colour was pale; in two it was occasionally bloody. The urine was acid in all but one. Its specific gravity was generally below the normal standard, but in some it was up to it. The amount of albumen varied, in many cases being a mere trace, in some very copious. In certain cases the quantity varied remarkably from time to time, both during the same day and on different days.

Hyaline and granular casts were found in a large proportion of cases, and in four instances in which the amount of urea was determined it was found diminished. The amount was determined and found diminished in other cases besides those included in the table. Three of the patients suffered from pains in the loins, only one to a considerable extent.

These facts confirm remarkably the ideas generally prevalent as to the conditions of the renal secretion in this form of Bright's disease.

Of symptoms connected with the alimentary canal, the most common were nausea, vomiting, and catarrh of the stomach. One or other of these was present in eleven of the cases, but not constantly, nor in the early stage. The blood presented in three cases a slight increase of white corpuscles. It is noted as natural in thirteen cases, and as poor in red corpuscles in one; but these remarks apply only to microscopic examination, and I have made no chemical analysis of the blood.

Hæmorrhages occurred to a serious extent in four cases, and slightly in one. The heart was hypertrophied in sixteen of the cases, the hypertrophy generally most marked in the left ventricle. In four the heart was natural. Vessels of the size of the radial were noted as thickened and sclerosed in thirteen. The pulse was, in almost all, full and hard. In two of the three cases, in which I have notes of the condition of the minute arteries, there was thickening due to hypertrophy of the middle coat. The degree of hypertrophy of heart and of alteration in the middle-sized arteries strictly corresponded to the advance of the disease, so that evidently from the operation of a common cause, or in consequence of the disease, hypertrophy took place.

From all I have seen of these conditions, both in this and in other forms of Bright's disease, I am satisfied that the changes, both in heart and arteries, are, in some way or other, consequences, as Bright and Johnson suppose, not mere concomitants of the affection. Statistics which I formerly published (see *Bright's Disease of the Kidneys*, 2nd ed., p. 308) shewed that, of cases of the inflammatory form fatal in the first stage, hypertrophy of the heart was present in 12.5 per cent.

Among the nervous symptoms, none is so common or so persistent as neuro-retinitis. This was present in eight of the twenty cases, and in several constituted the first symptom which attracted attention. Many cases had the oedematous conjunctiva, and one or two had hæmorrhage into that structure. The cerebral symptoms consequent upon the disease existed in seven of the twenty cases, convulsions occurred in six, severe headache in about the same number, and coma ushered in the fatal result in five. In several cases convulsions occurred occasionally, and afterwards disappeared. Of those fatal in the second stage, it occurred in 38.5 per cent.; and of those in the third, in 100 per cent. These statistics prove that the changes in the circulatory system are consequences of the renal affection.

I have hitherto believed that the old theory of embarrassment of circulation from impurity of blood explained the change; but I cannot

altogether refuse credence to the ingenious hypothesis of Dr. Johnson, which would refer it primarily to a protective action on the part of the small arteries. This hypothesis certainly affords an explanation of the hypertrophy of arteries which Dr. Johnson discovered; and I must say that no other explanation occurs to me, unless this thickening could be shown to promote the propulsion of the blood. But, before accepting Dr. Johnson's hypothesis, it would be necessary to explain the occurrence in certain cases of cardiac hypertrophy with normal vessels.

It appears to me that the sclerosis in the smaller arteries and the thickening of the outer coat of the minute vessels are both to be ascribed to increase of connective tissue, which may be a result of increased tension within the vessels, or, perhaps, a local manifestation of that tendency to increase of connective tissue, which is so marked in the kidneys. Had the theory of Gull and Sutton been that the renal disease was a local manifestation of a constitutional tendency to increase of connective tissue, those who are of my way of thinking would have had nothing to say against it.

Among the diseases of the respiratory system, the most common were congestion, œdema, and bronchitis. These occurred in nine of the cases. They are extremely common towards the end. Emphysema is not unfrequently associated with the condition, and pleurisy occurred as a complication in three of the twenty cases. There was slight dropsy in a considerable number of the cases, but it was persistently present in none. Occasional swelling of the feet, puffiness of the eyelids, and œdema of the conjunctiva, are symptoms very frequently present. In one case the patient made a temporary recovery from coma. Delirium occurred also in a few of the cases; mania in one.

Besides these consequent complications, there were several chronic degenerative diseases of the nerve-centres. One patient had glosso-labial paralysis and muscular atrophy, three had aphasia and slight hemiplegia. Of the fatal cases, nine in number, death resulted from exhaustion in one; from uræmia in five; from pulmonary œdema and congestion and pleurisy in three.

The study of these cases appears to me fully to confirm the views which I have elsewhere advanced as to the symptoms, clinical history, and complications of the disease; and I hope that this paper may be accepted by the profession as a slight contribution towards the consolidation of our knowledge of these affections.

CASES OF COLOTOMY.*

By CHRISTOPHER HEATH, F.R.C.S.,

Surgeon to University College Hospital, and the Hospital for Women.

HAVING had during the last three years occasion to perform the operation of colotomy in the left loin nine times, I wish to bring the particulars briefly before the members of the surgical section, being convinced that the operation is a most valuable one, and applicable with great advantage to many cases otherwise irremediable.

Of my nine cases, which all occurred in females, two operations were undertaken for cancer of the rectum, causing obstruction, which had existed many days before the patients came under my notice: both died. Three operations were performed for scirrhus in an earlier stage before obstruction had occurred, and of these one died and two recovered; one of these patients dying seven months afterwards, and the other being about and well seven months after the operation. Two operations were performed for syphilitic ulceration and stricture; both recovered, and are alive now. One operation was performed as a last resource in a patient worn out with extensive fistule and ulceration (probably syphilitic) before she came under my notice, and proved fatal. One operation was performed for the relief of a recto-vesical fistula, and was perfectly successful. The result, therefore, was four deaths and five immediate recoveries. (See Postscript.)

CASE I.—Sophia D., aged 49, married twenty-six years, having had four children, was admitted into the Hospital for Women in January 1871. For six months she had had constant inclination to go to stool, with little result; there was no blood passed, and no pain during the act. Three months before, she began to pass blood with great straining, and had been treated for piles. On admission, two inches up the rectum there was a ring of hard irregular growths, admitting the point of the finger; the bowels had not acted for five days, but were relieved by an enema and medicine.

Colotomy was performed on January 28th, and the patient was dis-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in London, August 1873.

charged on February 25th. All difficulty of defæcation was relieved by the operation; but the disease of the bowel made progress, and the patient eventually died on July 31st, after suffering great pain. The *post mortem* examination showed a cancerous mass, occupying Douglas's pouch, involving the rectum, and firmly adherent to the uterus.

CASE II.—Sarah J., aged 42, married twenty-one years, had had three children and four abortions. She was admitted into the Hospital for Women on February 3rd, 1871, for obstruction of the bowels, which had existed for seven days, and was accompanied by stercoraceous vomiting. She had some months before been under treatment for scirrhus of the rectum, but had failed to attend. Colotomy was performed on the following morning, and the patient was relieved for the time, but gradually sank and died on the tenth day. At the *post mortem* examination, the walls of the rectum were found infiltrated with cancer, and the passage almost completely closed.

CASE III was a private patient, and her case has already been brought before the Clinical Society of London. She was brought to me by Dr. Grigg in January 1872, suffering from the constant passage of faeces through the bladder, and occasional blocking of the urethra. Twelve years before, she had had a pelvic abscess on the left side after the birth of a dead child, and three years afterwards she passed some membrane *per urethram*, since which time faeces had constantly passed with the urine, giving rise to very great and constant agony. The operation was performed on January 22nd, 1872, and the patient made a good recovery, being at once relieved from all inconvenience as regarded the bladder, and having but little trouble with the artificial opening. She is now alive and well, and able to go about as usual.

CASE IV.—Sarah Jane R., aged 32, married twelve years, who had had four miscarriages, was admitted into the Hospital for Women on April 22nd, 1872, in a very feeble and emaciated condition, and with the perinæum riddled with fistulae, through which faecal matter constantly oozed. There was also ulceration and stricture of the rectum, with a recto-vaginal fistula, due to the syphilitic ulceration, under which the patient had suffered for at least four years—*i.e.* since the last miscarriage. The case was almost hopeless; but her only chance of life lay in relieving the constant irritation and suffering caused by the flow of faeces, and I therefore recommended the operation of colotomy. This was done on April 27th, the patient being in a very exhausted condition, from which she never fully rallied, but died on the following morning. This patient had been for the six weeks before her admission in another metropolitan hospital, where she had decidedly lost ground daily; but the question of operation does not appear to have been entertained.

CASE V.—Charlotte T., aged 49, single, was admitted into the Hospital for Women on January 14th, 1873, with almost complete obstruction of the rectum by masses of scirrhus, one of which, of the size of a walnut, protruded through the anus. For nearly a year she had suffered from difficulty and pain about the rectum, and had passed blood. The nature and danger of the disease, and the relief to be gained by the operation, were fully explained to the patient, and colotomy was performed on January 18th, and at the same time the protruding cancerous mass was removed with the galvanic cautery. This latter proceeding was repeated on February 8th, with great relief, and the patient was discharged on March 11th. She has since that date attended as an out-patient, and is very comfortable, her only complaint being the discharge, which exudes from the cancer in the bowel.

CASE VI.—Elizabeth F., aged 64, married, but no family, had been an out-patient at the Hospital for Women since May 1871, having a year before that time began to suffer from pain in the rectum. Scirrhus was diagnosed, and she was relieved by palliative treatment; but the disease advanced so that complete obstruction became imminent, and she suffered considerable pain. Under these circumstances she was admitted into the hospital, and colotomy was performed on February 22nd, 1873. Some difficulty was experienced in reaching the bowel, owing to its undistended condition. The patient was very restless after the operation, and complained of a good deal of pain. In the evening, the abdomen was resonant and distended, but not painful. On the following day, the pulse was 120, temperature 102.6 deg., and the expression anxious. On the 24th, the pulse was 120, temperature 101 deg., and she was restless and excited, the abdomen being tense. On the 25th, she had had a good night; pulse 116, temperature 101.2 deg. The abdomen had become less distended under assiduous poulticing, and faeces had begun to pass by the wound. Towards evening, however, she was sick, the abdomen became rapidly distended, and she died at 10 P.M. The *post mortem* examination showed peritonitis in the left loin, but no opening in the peritoneum or escape of faecal matter. In the rectum was a scirrhus mass of the size of a large orange, ulcerated at one or two spots on the mucous surface. The wound was healthy.

CASE VII.—Katie R., aged 23, mother of two children, was admitted

into the Hospital for Women in February 1873, with syphilitic ulceration and stricture of the rectum, with profuse discharge. She was suffering from constant diarrhoea when admitted, and was in a very weak condition. Colotomy was performed on April 4th, and, it being impossible to keep the bowel distended, in reaching it I found that I had opened the peritoneum; I therefore put in extra silk sutures, so as to prevent faecal matter from becoming extravasated. The patient had some pain in, and distension of, the abdomen afterwards, but no marked peritonitis. The relief from pain given by the operation was marked, though a good deal of discharge continued *per rectum* whilst she remained in the hospital. She was discharged on May 27th.

CASE VIII.—Louisa K., aged 27, was admitted into University College Hospital, for the second time, on May 31st, 1873, with syphilitic ulceration and stricture of the rectum. She was constantly passing liquid faeces, mixed with discharge, and experienced great pain, which disabled her from following her occupation as a needlewoman. Colotomy was performed on June 4th, the bowel being distended with warm water, and the patient made an uninterruptedly good recovery, being completely relieved from pain, and almost entirely of the discharge.

CASE IX.—A married woman, aged 51, was admitted into University College Hospital on July 4th, 1873, with a history of three weeks' obstruction of the bowels, following upon difficulty in defæcating of some months' duration. She had been under medical care, and various remedies had been tried, without relief. The abdomen was greatly distended, and the patient was in great suffering. *Per rectum*, nothing could be discovered; but percussion showed the large intestine to be greatly distended with faecal matter. Colotomy was performed on the 5th without any difficulty, the distended colon being easily reached and opened, giving exit to a large quantity of liquid faeces. The patient was relieved, but never rallied thoroughly, and died exhausted fourteen hours after the operation. At the *post mortem* examination, the upper part of the rectum was found completely obstructed by a cancerous stricture. The wound was healthy; but it was found that in opening the bowel, the reflexion of peritoneum had just been divided, making a clean cut opening of one-eighth of an inch. There was no evidence whatever of peritonitis, and death must be attributed rather to shock and exhaustion.

The preceding cases illustrate some of the affections for which, in my opinion, the operation of colotomy is both necessary and advisable. When performed in proper time, before the patient has become exhausted by pain or obstruction, the operation is a fairly successful one, the immediate risk being small. The operation is by no means difficult in the majority of instances; and though it may be occasionally impossible to avoid opening the peritoneum, that accident is not necessarily fatal. The operation is distinctly curative in the frequent cases of syphilitic ulceration of the rectum, and prolongs life in comfort, in cases of cancerous disease, by preventing the occurrence of obstruction.

POSTSCRIPT.—Since this paper was written, I have had two other successful cases: one operated on at the Hospital for Women, in the presence of several members of the Association, on August 8th, for syphilitic disease of the bowel; and the other at University College Hospital, for cancer. I have, therefore, had eleven cases, with four deaths, and seven immediate recoveries.—November 1873.

SEQUEL OF A CASE OF COLOTOMY.

By THOMAS B. BOTT, M.D.,
Surgeon to the Bury Dispensary.

I SEIZE the present opportunity, when Mr. Christopher Heath is about to draw the attention of the profession to the subject of colotomy (in a paper which he has promised to read at the annual meeting*), to send a brief continuation of the case of colotomy which was published in the JOURNAL on November 17th, 1870, at page 551.

The former account of James Walkden ceased at about eight months after the operation. At that time, he had been out to be photographed. He soon tried his old employment of brick-making; but he found it too laborious and gave it up, as he had friends who supplied his daily wants. After a time, a donkey and cart were bought for him, and he occupied himself in carting coal. The artificial anus did not appear to be a very great nuisance to him, if he let out the excrement twice a day. On one occasion, when he caught the prevailing diarrhoea, he had to lay himself up, in consequence of the fluid excrement escaping at inconvenient times. After using the plug for the artificial anus about eighteen months, it was so worn that he required a fresh one.

* This paper was received a short time before the Annual Meeting of the Association in August last.