great, but the convalescence, though prolonged, was ultimately complete.

As soon as the fever disappeared, and the discharge from the seton began to assume the appearance of healthy pus, the absorption or dissipation of the gland, which, as I have observed, had previously not been very marked, made rapid progress, and by the time the strength was re-established almost all vestige of enlargement had disappeared. I have allowed some time to elapse since writing the above, and am enabled to say that the cure is perfectly satisfactory, and the relief most grateful to the patient.

REMARKS.—There is nothing new in this operation, yet I think it scarcely meets with that attention which it deserves—at least I have myself never before seen it resorted to. Any of your readers who may be interested in the matter will find several cases detailed in the *Transactions* of the Royal Medical and Chirurgical Society. Although the operation was known at least a century ago, yet Dr. Quadri, of Naples, seems to have revived it, and practised it to a considerable extent about the years 1817 and 1818. Mr. Copland Hutchinson, in 1819, also tried it in some instances; Mr. A. T. Thompson and others have also adopted it, the general result of which seems to have been favourable. Mr. C. Hutchinson observes:—

“Upon the whole the operation by seton in bronchocoele is not, generally speaking, to be considered as dangerous, when performed by a judicious surgeon, well acquainted with the anatomical structure of parts, but in delicate and irritable habits, and in the hard lobulated species of the disease, some circumspection is to be observed; and, indeed, in such constitutions a cautious practitioner would well weigh the necessity of operating at all, unless the symptoms of suffocation and impeded deglutition became urgent. In some cases recorded, the danger from hæmorrhage seems to have been much increased from using a common seton needle. In order to escape such a contingency, I had a curved trochar made, and fixed in a handle, grooved like a lithotomy staff, with an eye behind the shoulder; then, threading this with a single silk, to which a skein was attached, I passed the trochar in the manner already described, until I could get hold of the single skein; I then withdrew the trochar, and with great ease drew the skein through the canal thus formed.

UREA DETECTED IN THE RICE-WATER EVACUATIONS OF CHOLERA.

By HENRY JOHNSON, M.D., Shrewsbury.

a About two or three fluid-ounces of the rice-water evacuations of a man, ill of cholera, were evaporated to dryness in a steam bath.

b Distilled water heated to 200° Fahrenheit was poured upon the dry mass (a) broken up with a spatula, and the mixture was digested in a steam bath for about half an hour.

c The digested fluid (b) was filtered, and the filtered

fluid was evaporated again to dryness in a steam bath, and the residue digested with a considerable proportion of absolute alcohol, at a greater heat, for half an hour.

d The digested liquor (c) was again filtered, and the liquor evaporated to dryness.

The dry mass (d) was now dissolved in a small portion of warm distilled water. It was concentrated by evaporation to the consistence of a thin syrup, and a few drops of nitric acid added. A slight effervescence took place, and having been set aside to crystallize, the next morning I saw *distinct* long crystals, which could be nothing else but *nitrate of urea*.

The foregoing process is that given by Dr. G. O. Rees,* for the examination of blood supposed to contain urea.

I have good reason to believe that no urine was passed with the evacuation now examined. The man from whom it was procured was at the time in the early stage of the disease, and had suppression of urine, and was not known to pass any until a day or two afterwards. I determined, however, to repeat the experiment, and I therefore sent to a union workhouse in the neighbourhood, where the cholera was still raging, to procure another specimen of the rice-water evacuation, requesting that every precaution might be used to obtain it in the proper stage of the disease, and free from admixture.

The same process was followed with this second specimen, and I obtained a fluid which, on gentle evaporation, after the addition of nitric acid, deposited abundant crystals; these appeared under the microscope as beautiful “thin rhombic plates,” but the acute angle was not “replaced by a small plane,” as described by Ragsky.†

There is, therefore, I think no doubt that *urea* is contained in the discharges from the bowels in cholera patients, at a time when the secretion of urine is suppressed, or I ought rather to say, retained. I believe that this is a new fact, at least I can find no printed record of it in any work to which I have now access.

Professor Simon‡ says that urea has been discovered by four chemists in the *blood* of cholera patients, but he makes no mention of it in the evacuations.

Dr. Watson,§ after remarking the freedom of cholera patients from coma, when the urine has been retained for several days, says,—“Was the urine here drained off from the blood in the enormous and unnatural flow from the stomach and bowels? I think it probably was, but I do not know that any chemical search was ever made for that substance in the fluids so effused.”

These notices I have found since my experiments were made, at which time I was not aware that any one had even conjectured the existence of urea in,

* Analysis of blood and urine, p. 38.

† Dr. Ranking's “Half-Yearly Abstract,” vol. ii., p. 356.

‡ Animal Chemistry (Sydenham Society's edition,) vol. i., p. 49 and 325.

§ Lectures, vol. ii., p. 552.

what appeared to me, a very unheard-of locality. The fact appears to me curious, and deserving of being recorded, if only for the sake of leading to further investigation. I have at present no opportunity of pursuing it further, as the cholera is subsiding in this neighbourhood.

September 7, 1849.

Hospital Reports.

QUEEN'S HOSPITAL, BIRMINGHAM.

CLINICAL REPORTS OF SURGICAL CASES UNDER THE TREATMENT OF PROFESSOR SANDS COX, F.R.S., SENIOR SURGEON TO THE HOSPITAL.

Reported by Mr. PETER HINCKES BIRD, late Resident Medical Officer.

CASE XXVI.

WOUND OF THE RADIAL ARTERY.

Michael Dent, aged 40, a carman, was admitted under the care of Professor Sands Cox, on the evening of July 12th, 1847. It was stated that he put his arm through a window, and severely cut himself. He bled profusely at the time, and went to a surgeon, who put on a tourniquet as a temporary expedient. He was intoxicated at the time the accident occurred.

On admittance his left fore-arm presented several lacerated wounds, one of which was to the outer side, at the junction of the middle with the lower-third of the radius, over the course of the radial artery. On loosening the tourniquet a gush of blood took place, evidently from the radial artery.

Treatment.—The brachial artery having been compressed; the wound being a very small one, was enlarged, and the artery exposed; it was found to be torn, but not completely divided. A ligature was applied above and below the wound in the artery, and the vessel divided between the ligatures. After waiting a short time, and no fresh hæmorrhage having occurred, the wounds were dressed, and the patient put to bed. He was extremely weak, having lost a large quantity of blood previous to his admittance. Pulse very small; countenance pale; the skin cold and clammy. A draught containing spirit of ammonia, together with some wine, were administered. The arm to be kept cool with the spirit wash. Warmth to be applied to the extremities.

13th.—No return of hæmorrhage; he feels better, but is very weak from loss of blood; pulse 96, weak and compressible.

17th.—Recurrence of hæmorrhage, apparently from the lower end of the artery; easily stopped by the application of the tourniquet over the brachial artery, and the application of cold.

20th.—Both ligatures came away.

24th.—Wound quite healed. Discharged.

REMARKS.—The above instance of wounded artery well exemplifies the practice to be adopted in such cases. When an artery is merely cut or torn, but not

completely divided, it is in the same state with regard to hæmorrhage as if it had given way by ulceration. It can neither retract nor contract, and unless pressure can be accurately applied, will continue to bleed until the patient is destroyed. The practice to be pursued is to divide the vessel, if it is a small one, such as the temporal artery, when it will be able to contract and retract, and the bleeding will soon cease. If an artery of larger dimensions be wounded, a ligature should be applied above and below the wound, and the vessel may or may not be divided between them, at the pleasure of the surgeon.* In all hæmorrhages from arteries the ligature alone is to be depended upon, and it may be laid down as a general rule that each extremity of the wounded vessel should be tied as near as possible to the wound in its walls.

The necessity of tying both ends of a wounded artery is evident from the fact that the anastomoses in all parts of the body are so extensive, as to furnish a supply of blood, which may pass through the lower extremity of the wounded vessel in a sufficient stream to produce an alarming, and in some instances, a fatal hæmorrhage.

In the above case secondary hæmorrhage occurred about the fifth day. It most probably came from the lower end of the artery, the upper extremity of the vessel being closed by the natural processes.

Mr. Guthrie has observed that the lower end of a divided artery is more prone to secondary hæmorrhage than the upper, and his observations lead him to conclude that nature adopts for its closure a process different from that for the upper end; that the retraction and contraction of the lower end of a divided artery is neither so perfect nor so permanent as at the upper end; and that the internal coagululum is in many instances altogether wanting, or very defective in its formation, giving rise to a very different result from that which is observable in the upper divided end of the same vessel.

PROVINCIAL

Medical & Surgical Journal.

WEDNESDAY, SEPTEMBER 19, 1849.

A question in connection with cholera, of high interest at the present time, especially in those localities which have hitherto been spared, or which have but recently been visited by the pestilence, is that of the propriety of forming special establishments or hospitals for the reception and treatment of cases.

The opponents to cholera hospitals object to such establishments, on the supposition that if cholera be propagated by contagion, the accumulation of patients intensifies the poison to a degree which is not only detrimental to the patients themselves, but which has the effect of

* See "On Diseases and Injuries of Arteries," by Guthrie, p. 253.