17th.—Slough separating; pulse 88; his general appearance much improved. He will have a good stump, the slough not having extended to that portion of the skin which covers the ends of the bones.

19th.—Slough quite separated, and its place occupied by healthy granulations.

24th.—Stump nearly healed; pulse 66; tongue clean; appetite good. He was yesterday placed on full diet, and has twenty ounces of brandy and a pint of porter daily. Convalescent as regards his general condition, but he is not yet *compos mentis*, being still unable to converse in a rational, consecutive manner. He will answer the first question put to him rationally, but will then diverge into some topic altogether irrelevant. He has no memory of anything that has happened; he cannot even remember events occurring only a few hours since, and will lose his temper with the nurses or his wife, whom he charges with neglecting him, and not coming near him, notwithstanding their attentions have been most assiduous, and he has never been left alone.

July 18th.—A few days after the last note was made, his intellectual faculties returned, and for the last fortnight he has been going about the ward on crutches, and is gaining strength and flesh. He recollects nothing of the accident, beyond the fact that he was wheeling a barrow on the scaffolding at the moment it gave way; but from that time till the 26th of June, when he was removed from a private ward in which he had been placed into the general ward, his existence was a blank. He has no recollection of either of the operations, and was surprised to find he had lost his leg.

ST. THOMAS'S HOSPITAL.

FRACTURE OF THE RAMUS OF THE ISCHIUM OF THE RIGHT SIDE, WITH RUPTURE OF THE URETHRA; RECOVERY.

(Under the care of Mr. LE GROS CLARK.)

OF the fatal complications which are often associated with injuries to the pelvis, laceration and rupture of the bladder, urethra, or rectum, are not the least important. Now and then some of the larger bloodvessels are torn across. In the following case the urethra was ruptured, and the patient could not pass any urine. With some difficulty a catheter was introduced into the bladder, and the urine drawn off, thus showing this viscus to be intact. The instrument was retained until a recovery took place.

On the present occasion we may refer to an instance of fracture of the pelvis, with rupture of the bladder and urethra, under Mr. Fergusson's care, at King's College Hospital, which ended in death (*THE LANCET*, vol. i., 1852, p. 302); the report of a case of fracture of the pelvis, by Dr. Bradshaw, of Reading, in which death ensued from injury to the spinal nervous system (vol. ii., 1853, p. 571); a case of fracture of the pelvis, with laceration of the urethra, in Professor Syme's Lectures on Clinical Surgery (vol. i., 1855, p. 174); another, with rupture of the bladder, &c., under Mr. Ure's care, at St. Mary's Hospital, death ensuing on the fourth day (vol. i., 1857, p. 315); an instance, under the care of Mr. Holthouse, at the Westminster Hospital, with laceration of the abdominal muscles, and death from pyæmia (*ibid.*, p. 316); another, with rupture of the bladder, and recovery, under Mr. Featherstonhaugh's care, at the Gateshead Dispensary (*ibid.*, p. 350); and, lastly, the notice of a case of compound and comminuted fracture of the pelvis, in which recovery ensued, under Mr. Holt's care, at the Westminster Hospital.

For the notes of the following case, we are indebted to Mr. W. Allingham, surgical registrar to the hospital:—

Thomas S—, aged twenty-eight, a guard on the South-Eastern Railway, was admitted into Henry's ward on the evening of the 14th of April last. It appears that this man was crossing part of the rails at London-bridge, when he was struck by an engine, which was coming up to the station at the rate of about nine miles an hour. The first blow he received was upon his right hip, and as he was trying to scramble out of the way, he was again struck just above the right eye, and fortunately knocked off the rail, so that the engine passed without running over him. When brought to the hospital, he was in a state of considerable prostration, complained of great pain in the right groin and perinæum, and was unable to pass his urine. Some stimulant was administered, and the house-surgeon on duty passed a catheter, which seemed to enter the

bladder, but no urine escaped. On examination, a contused wound was observed on the right hip, and fracture of the ramus of the ischium was detected. Mr. Le Gros Clark saw him at ten P.M., and found that the urethra was ruptured; he with some difficulty introduced a catheter into the bladder, and drew off his urine, which was coloured by blood. The patient's sufferings were greatly aggravated by a troublesome cough, which he has had for some time past. The catheter was retained in the bladder, and twenty minims of Battley's sedative solution were ordered.

April 15th.—He slept at intervals during the night, and is not in any great pain, except when he coughs; there is extreme tenderness on pressure all over the abdomen; the urine is only slightly tinged with blood; the pulse is quick, and skin hot; bowels are confined, and some castor oil has been ordered. To continue the opiate.

16th.—He slept pretty well last night, but his cough is troublesome, and he can feel the grating of the fractured bone when he coughs; he takes his food pretty well, and seems cheerful; bowels not yet acted.

17th.—Much the same. Mr. Clark ordered a calomel and colocynth pill, and, as his cough was very troublesome, the following draught every four hours: half a drachm of compound tincture of camphor, and two drachms of the liquor of the acetate of ammonia, in water.

18th.—His cough kept him awake very much last night; he has less pain in the groin and perinæum, and the abdominal tenderness has subsided; the urine is now clear; bowels open; skin cool; tongue clean; pulse quiet. Ordered, half a grain of morphia at bed-time.

20th.—His cough is much better; countenance cheerful; urine slightly tinged with blood this morning; he has no headache nor shivering, and no pain unless he moves—he then, however, feels the bone grate. Mr. Clark removed the catheter to-day for the purpose of having it cleaned, and he replaced it without much trouble. The patient was ordered to be placed on a water bed yesterday, and finds it very comfortable.

27th.—He is going on exceedingly well; has not had any shivering, nor any unfavourable symptom; when he moves, he no longer feels crepitus; his appetite is good.

May 2nd.—The catheter was taken out to-day, and not replaced, and he finds that he can pass his urine tolerably comfortably and freely; his cough does not trouble him, and he is exceedingly cheerful.

16th.—He sits up in bed now, has no pain on moving, and passes his urine with ease; he is very anxious to get up.

24th.—He is now able to walk about the ward on crutches, and, although weak, feels quite well; he is going into the country to recruit his strength.

"DREADNOUGHT" HOSPITAL SHIP.

CHOLERA AND CHOLEROID DIARRHŒA.

(Under the care of Dr. BARNES.)

THE record of the earliest cases of a cholera epidemic is always replete with interest. In addition to their individual pathological features, it is upon these cases that the most important questions as to origin and mode of propagation must mainly depend for illustration. Whether the following cases, (for the histories of which we are indebted to Dr. Barnes' case-book, and to Mr. Bedford, the physicians' assistant,) mark the beginning of an epidemic, or whether—as we cannot but hope—they will remain isolated instances, they possess value as a chapter in the history of that formidable disease which now seems to become a periodical scourge to this country.

Down to the 28th of July, the general health of the *Dreadnought* had been excellent. Notwithstanding the offensive emanations from the river, there had been no particular disposition to diarrhœa, certainly not so much as has been remarked at a distance from the Thames; and during the last fortnight the state of the river had so much improved, that it had comparatively ceased to be annoying. On the 28th and 30th of July five remarkable cases were admitted.

CASE I.—C. W—, aged thirty-six, from Sydney, left his ship on the 15th, in the London Docks, and lodged in the neighbourhood. He went to Euston-square Station on the 23rd, where he was taken ill with purging, vomiting, and cramps; he was taken to University College Hospital, but left

in the afternoon, relieved. He was again seized with purging; his stools, he says, were "frothy, and like beer." When admitted, his skin was warm, pulse good, and tongue furred. He had infusion of cusparia, one ounce; dilute nitric acid, twenty minims; tincture of opium, ten minims: every four hours. Milk and beef-tea. The purging subsided, and on the 1st of August he was doing well.

CASE 2.—A. B.—, aged nineteen. He left Poole on the 9th of May for Hamburg, and was "there two or three weeks;" drank copiously of water from the river. He left his ship—the *Eagle* sailing-vessel—on the 28th, when she came into the pool from Hamburg, and was admitted on board the *Dreadnought*. Had been ill four days with purging, vomiting, and cramps; had serous evacuations every half-hour; had also hæmoptysis; skin, especially of abdomen, hot; pulse quick; face suffused. Ordered cusparia, nitric acid, and laudanum mixture; milk and beef-tea. Under this treatment he improved; but on the 1st of August, as there was still a disposition to purging, with cramps in the belly, and hot skin, Dr. Barnes prescribed a pill of acetate of lead, two grains; and opium, one grain: to be taken every four hours. On the 2nd of August he had passed urine, and was better, but the skin was still burning.

CASE 3.—On the same day, (July 28th,) W. G.—, aged thirty-four, chief mate of the *Eugénie*, an American ship, was admitted. The *Eugénie* had sailed from the gulf of Florida with pitch-pine, and had been in the Commercial Dock about ten days. The crew had left; the chief mate, a boy, and a ship-keeper being the only residents on board for the greater part of the time. On the evening of the 27th, W. G.— was observed to look not so well as usual. At one A.M. of the 28th, he was seized with vomiting, purging, and cramp. He was admitted on board the *Dreadnought* at five-and-twenty minutes past ten A.M., in extreme collapse; skin blue, clammy; hands and feet shrivelled. If a fold of skin were pinched up, that fold remained like a dead man's. There was no capillary circulation; the vital elasticity of the skin was gone. Rice-water evacuations; pulse imperceptible; eyes sunken; voice husky. Ordered, hot-air bath, frictions with flannel, mustard epithems, saline drink. At four P.M. still collapsed, but he rallied a little towards evening. Complained of great thirst; tongue dry. Dr. Barnes ordered ice and iced water; calomel, a grain every hour; and saline drinks; dry cupping to the loins. On the 29th and 30th, although the skin, and especially the face, remained somewhat dusky, the pulse weak, and the voice cracked, he had considerably rallied. He had passed no urine since admission. On the 31st he seemed still better, but no urine. On the 1st of August, in the morning, his condition seemed no worse; he passed a small quantity of thick, dark urine; and a further small quantity about two P.M.; still frequent bilious vomiting. At three P.M. he began to flag, and died at four P.M. The urine being received in a vessel with chloride of lime, could not be subjected to chemical examination. We were informed that this man was addicted to whiskey drinking. A visit to the ship *Eugénie* disclosed a very dirty condition of the upper deck, and water brought from the Gulf of Florida, kept in casks, was still in use. The water had no smell, but it was dirty. Dr. Barnes called attention to this case as an example that the return of urine was not an absolute ground for a favourable prognosis.

CASE 4.—T. H.—, aged twenty-nine, a stoker, admitted the 30th of July from the *Cosmopolitan*, a steam-ship running to Hamburg. This man was taken ill in the pool on the 24th, being sick and purged. He, however, kept to his work, went out to Hamburg, and was admitted on board the *Dreadnought* when the ship came into the river on the 30th. There was bile in the fæces; sickness and purging had abated; no collapse; skin hot. Ordered calomel, a grain every hour. He went on improving, and on the 1st of August he was ordered cusparia, nitric acid, and laudanum mixture. This case, although, perhaps, deserving the epithet "choleroïd," may, Dr. Barnes observed, have been only a case of diarrhœa, of the same character as many hundreds occurring about the same time in all parts of London. On the 2nd he was still jaundiced, but on the whole better.

CASE 5.—J. D.—, aged twenty-five, a sailor, also from the *Cosmopolitan*, admitted on the 30th of July. Almost all the men on board were seized after leaving Hamburg on the 25th, "being worked upwards and downwards." One man, a stoker, was landed at Gravesend, and died; another was brought to the *Dreadnought*, and died on the stage before he could be got to bed. J. D.— and T. H.—, of the same crew, were ad-

mitted. J. D.— was taken at two P.M. on the 29th, when the ship was entering the mouth of the Thames, with purging; he felt weak and exhausted. This morning he had cramp and vomiting; passed a small quantity of urine; hands and feet shrivelled, not cold; vomiting continued; great thirst; tongue dry; pulse weak. Collapse not profound. Ordered calomel, one grain every hour; hot-air bath. Had four evacuations in two hours. He improved somewhat, although bilious vomiting continued. On the night of the 31st he slept well; had two watery evacuations. August 1st: pulse 84; skin warm; has passed no urine since the morning of admission. Dry cupping to the loins. Continue saline drink. Aug. 2nd: Passed urine; skin warmer; vomited in the night; two stools of natural colour; still hiccough; on the whole better.

It was remarked that *after* the admission of the above cases, several patients exhibited a tendency to diarrhœa—namely, a man on the surgical deck, which is above the medical deck, on which the choleroïd cases were; and two others on the medical deck. It seemed as if a cholera-atmosphere were suddenly developed. The deck was by no means crowded. It seemed that the milk disagreed with several persons: it was not perceptibly soured, but Dr. Barnes, believing that a partial change might very quickly take place during the hot weather, ordered it to be kept cool by throwing in lumps of Wenham-lake ice from time to time. It was thus preserved better, and was undoubtedly more grateful to the fevered patients.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

TUESDAY, JUNE 28TH, 1859.

MR. F. C. SKEY, PRESIDENT, IN THE CHAIR.

ON THE CONNEXION BETWEEN THE HEAT OF THE BODY AND THE EXCRETED AMOUNTS OF UREA, CHLORIDE OF SODIUM, AND URINARY WATER, DURING A FIT OF AGUE.

BY SYDNEY RINGER, ESQ.,

LATE PHYSICIANS' ASSISTANT IN UNIVERSITY COLLEGE HOSPITAL.

THE author commences his paper by a reference to the observations of Von Baerunsprung, Zimmermann, Michael Wunderlich, and others, on the temperature of the body during ague; and to the observations of Traube and Lochman, Redenbacher, Moos, and Hammond, on the excretion of urea, chloride of sodium, and water, during the fit. He then states that the object of the following paper was to trace out more particularly the connexion, if any, between the height of the thermometer and the excreted amount of these substances; and he then describes his method of investigation, and the precautions taken against sources of error. His observations were made on two untreated cases of ague (one of quotidian and one of tertian) in University College Hospital, under the care of Dr. Parkes; and they are recorded in a series of charts and tables, showing the following particulars:—

1. The temperature of the body, as judged of by the thermometer, in the axilla, (after the manner of Wunderlich,) every quarter of an hour, for several hours before, during, and after the fit.

2. The hourly excretion of urea, before, during, and after the fit, in the first case; and the excretion according to stages, in the second case, as determined by the method of Liebig.

3. The hourly excretion of chloride of sodium and of urinary water during the same periods, in the first case; and the excretion by stages in the second.

4. The quantity of fluid drunk.

The following are the results in the first case (quotidian):—

The temperature of the body commenced to rise from forty-five to ninety minutes before any change was perceived by the patient, and continued to rise during the whole of the cold stage, and during part of the hot; it fell during the latter part of the hot and the whole of the sweating stage. The severity of the fit could be determined by the character of the rise, whether rapid or with oscillations, and by the variations of the temperature during the several stages; but the charts of temperature, and the comments given at length in the paper, must be consulted in order to exhibit this clearly. The urea was found to increase during the fit, as stated by Traube. The increase commenced before the first feelings of cold, and before,