the attempt. At this period there were no other symptoms present, so that it was impossible to determine the exact nature of the attack: but by degrees the disease became developed; the countenance assumed the tetanic expression; the masseter muscles and those of the cervical region were now firmly contracted, the sterno-cleido mastoid standing out like tense cords; the lower jaw became almost fixed; the tongue could with difficulty be protruded between the incisor teeth, and at times was spasmodically darted forwards, so as to run a danger of severe laceration. The walls of the abdomen likewise became extremely hard and rigid, and much difficulty and distress was experienced in passing urine, which could only be voided at long intervals, although a desire to do so was seldom absent. Pain was also complained of, shooting from the ensiform cartilage through the diaphragm towards the vertebral column, and the spasmodic jerks from which the patient suffered were so intense and frequent, as to deprive him of rest both night and day. His bowels were obstinately constipated, and irritability of the stomach, with vomiting, added much to his general distress. His skin was bathed in profuse perspiration. The pulse, which at times was intermittent, was also irregular as to its frequency, an extreme variation often occurring within a few hours.

Such were the symptoms present, and such was the condition of the patient on the eighth day from the commencement of the attack; and as the case appeared to be rapidly going from bad to worse, I thought it necessary to alter the treatment from that which I had been pursuing—namely, mercury, with anodynes and antispasmodics—to what I considered might be attended with more success. I accordingly prescribed liquor potassæ, which I ordered in combination with syrup of poppies and camphor water, after a few doses of which I was much pleased to find a marked improvement in the most urgent of the symptoms, the earliest amendment being a perfect freedom from the difficulty of passing urine. The stomach soon became settled, and capable of retaining nourishment. By degrees the tension of the muscles, and the spasmodic jerkings, became diminished. The bowels acted without the assistance of enemata, which were before absolutely necessary, and in every particular, progress towards health followed the employment of this medicine.

Such are the outlines of this case; and I consider it may be satisfactory if I state my reasons for selecting the liquor potassæ. But first I may refer to the very uncertain and scanty information which we derive from pathological appearances, even when such appearances are present; for often the most careful examination fails to discover any alteration of structure which can be looked upon as the effects of tetanus, and tetanus only. No doubt there is sometimes found a vascularity of the mucous membrane of the œsophagus, and of that covering the cardiac orifice of the stomach; at others, there is discovered some effusion within the cranium or spinal canal; but all or any of these are not always present, and are, perhaps, more frequently so after death from other causes. The disease cannot be one of an inflammatory character, for whether it terminates fatally after a few days or some weeks, there is not, as a rule, any change left which can be considered as a product of inflammation, or which, if looked upon as such, bears the least ratio to the severity of the symptoms during life. But this very absence of morbid appearances leads me to suppose that mere functional disturbance in the operation of the nervous and muscular systems may constitute a principal, if not the entire, of the disease. When we remember how intimately incorporated are the capillary vessels and their contents with the medulla of the nerve and the fibrillæ of the muscle, it is easy to conceive how muscular contraction may follow on any irritation of the nerve-fibre by causing an accumulation of fluid in the vessels of the contracting muscle; and although it may be impossible to define the exact proportion in which the blood, the nerve, and the tonicity of the muscle may be engaged in tetanus, yet it appears to me that the rigidity of the last is different from the contraction which we are accustomed to find in other spasmodic diseases: it seems to resemble more the rigor mortis, or death-stiffening—a condition in which the influence of innervation is absent. But superadded to this, we observe in tetanus the alternating movements of contraction and relaxation, arising, no doubt, from reflex action operating through the nervous centres. To obtain a less easily excited condition of this system, also a diminution in the tonicity of the muscular fibre, and a decrease in that portion of the blood through whose agency is supplied irritability or vital activity to the nervous and muscular structures, would be to gain a certain control over an exciting cause, and a relaxation in the leading features of the disease; and believing that in liquor

potassæ we have a remedy calculated to effect these changes, I prescribed it in the foregoing case, at a time when all the symptoms were so urgent as to afford but slight hopes of recovery; and it is owing to the very rapid improvement which followed on its administration that I feel a further trial of liquor potassæ in tetanus may be attended with like success.

Mile-end, 1861.

REPORT OF A CASE OF SARCINA VENTRICULI, WITH VOMITING OF GALL-STONES.

By EDWIN J. MILES, Esq., M.R.C.S. & L.S.A.

E. L.—, aged fifty-six years, was occupied as a general servant till the age of twenty-five, when she married, and endured considerable anxiety from her husband having become subject to frequent epileptic fits, which led to insanity, and ultimately death, which occurred about eight years ago. She has had two children, both of a delicate constitution. Up to the time of the present attack her health has been good, excepting the occurrence of severe headaches, with bilious vomiting at each menstrual period. About four years since, the catamenia became irregular, occurring at intervals of three or four months, each period being attended with severe bilious headache as heretofore. She likewise suffered from hot flushes and burning pains over the hepatic region. Two years ago she was seized with violent cramp over the stomach, extending to the right side, which was relieved by hot bran poultices and opium. At this time the liver was enlarged, skin sallow, appetite deficient, bowels constipated, with occasional syncope and general debility; she had frequent copious vomitings preceded by great heat and fulness over the epigastrium; the vomited matters amounted to three or four pints daily, and consisted of a brownish fluid, having an acid reaction, with a yeast-like stratum floating on the surface, which the microscope proved to consist of partially digested food, with an abundance of sarcinæ and torulæ. I should on this discovery have administered to my patient the sulphite of potash, originally suggested by Dr. Jenner, and which in other instances of sarcinal vomiting I have seen prove remarkably beneficial; but I had arranged to send her to a provincial hospital, and was consequently prevented from thus treating her case.

On her return home, after an absence of thirteen weeks, the liver was much reduced in size, and the pains and burnings over the hepatic region much less severe; but the vomiting was undiminished, and possessed the same general and microscopic characters as before.

Eight days after her return home (during which time she had taken no medicine) she was seized with violent palpitation; the heart sounds could not be distinguished by the stethoscope, the organ labouring tumultuously; the surface of her body was cold, and the whole frame trembled. After a draught composed of ether and opium, the palpitation and trembling subsided, and were succeeded by intense pain over the stomach and towards the right side. A bran poultice was applied, and the draught repeated. This was followed by violent sickness, during which she vomited a large gall-stone, of a flattened globular form, and seven tenths by five-tenths of an inch in size. She then became easier, but was unable to leave her bed for two weeks, at the expiration of which time she had an attack similar in every respect to that described above, and which terminated by the ejection of another gall-stone, of equal dimensions to the former.

I now put her on a purely fluid but nourishing diet, which was continued till the following June (i. e., from February), during which time she suffered from no return of the vomiting, excepting for one or two days after the second gall-stone came from her. She took no medicine, and her general health now became much improved, but still very weak. By my advice she went in June to the sea-side, and whilst there commenced taking a little solid food, which she has continued to do with caution up to the present time. Her health has gradually improved, there being no return of the vomiting or palpitation, but occasionally pain over the hepatic region, which is readily relieved by a combination of nitro-muriatic acid, hyoscyamus, and taraxacum. She is now able to attend to her ordinary

duties, and is in better health than she has been for a number of years.

The chief point of interest in this case appears to be the total subsidence of the sarcinal vomiting succeeding immediately on the removal of the two large gall-stones from the stomach, and on her assuming a strictly fluid diet.

Gillingham, Dorset, Jan. 1861.

A Mirror OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.*, lib. 14. Proœmium.

CHARING-CROSS HOSPITAL.

CONCURRENCE OF PURPURA WITH VALVULAR DISEASE OF THE HEART ; THREE CASES ; RECOVERY.

(Under the care of Dr. HYDE SALTER.)

THE following cases illustrate a concurrence which Dr. Salter states he has on several occasions remarked—that of purpura with valvular disease of the heart, though he believes that the connexion between the two is not direct, but mediate, through the intervention of a third condition, of which both the endocardial disease and the purpura are the results.

CASE 1.—Eliza C—, a girl aged fifteen, but having a look rather of twelve or thirteen, thin, puny, and pale, though with evidently naturally a florid complexion, and having a good deal of the rheumatic aspect, was admitted with a loud, rough, mitral-systolic bruit, tumultuous heart's action, and shortness of breath on exertion. Her history was that she had had rheumatic fever two years before, which had affected the heart, and that since that time she had never been thoroughly well; her growth had been stopped; she was frequently liable to rheumatic pains, and suffered from palpitation on exertion, and even without. It was in consequence of a gradual increase of these symptoms that she applied for relief. Under a treatment combining alkali, iodide of iron, and cod-liver oil, she gradually improved, and was discharged. She had left the hospital only a week or two, when she returned with both her legs covered with purpura—a profuse and thick rash—from the knees to the ankles. She seemed to have gone back in all respects since she left the hospital, partly, probably, from discontinuing the medicine and partly from not living so well. It was then learned that she had had an exactly similar attack some months before, and had since been liable occasionally to a few spots, but always in the neighbourhood of the shins. Under the use of quinine, sulphuric acid, good diet, and rest in the horizontal position, the purpura gradually died away, and in ten days or a fortnight was gone.

CASE 2.—William W—, a pale, anæmic-looking boy, aged fourteen, his aspect indicating a dash of struma in his constitution, was admitted June 23rd, 1860, with rheumatism, complicated with heart-disease. He states that he has always been a very healthy boy until last winter, when he caught cold, which brought on rheumatism, which however did not confine him to bed, and from which he soon recovered. Six weeks before his admission, the rheumatism came on again, principally affecting his hands, knees, and ankles; and for four weeks before his admission he found that on first getting into bed he was unable to lie down from palpitation, shortness of breath, and cough. On examining his heart, a mitral-systolic bruit was found, accompanied with tumultuous action of the organ. No dropsy. He was ordered a drachm of citrate of potass, in an ounce of decoction of cinchona, thrice a day; and half a drachm of syrup of the iodide of iron, in two drachms of cod-liver oil, also thrice a day. Five days after his admission spots of purpura hæmorrhagica appeared on the anterior aspect of his legs, most abundant on the front and inside of the shin; at first a thin sprinkling, but soon a thick rash. Under a treatment

of sulphuric acid, quinine, and iron, the purpura gradually disappeared, but it was a fortnight before it was gone.

CASE 3.—J. N—, aged thirty-two, was admitted into Charing-cross Hospital, under Dr. Salter, on the 25th September, suffering from general dropsy and purpura of both legs. The spots varied in size from that of a pin's head to that of a split pea, and were confined to the front of the leg from the knee to the ankle. On listening to the heart, a loud mitral-systolic bruit was heard; the heart's action in other respects was normal. There was no history of rheumatism. The man had for years drunk too much, being employed in a brewery; his aspect was sallow; and the dropsy was supposed to depend upon renal disease, which further examination verified, as the urine was found to contain a good deal of blood and granular casts of the uriniferous tubes. The legs were ordered to be bandaged, the horizontal position to be maintained (indeed, the patient was confined to bed), and tonics and astringents were administered. Under this treatment the purpura and the œdema vanished together, and in ten days both were gone. But on the man leaving his bed subsequently, the purpura again appeared to a slight extent, and again disappeared on keeping the legs up and bandaging them.

With regard to the relation between the heart-disease and the purpura in these three cases, it could not be, as Dr. Salter remarked, direct, in any one of them. No doubt a certain form of purpura may be, and often is, directly caused by heart-disease; as in those cases where the general stasis of the circulation, brought about by the actual or virtual obstruction at the heart, produces so great a tension of the venules and capillaries, that after relieving themselves to a certain extent by transudation they finally rupture, and blood escapes. The purpura in these cases always affects an enormously swollen limb, occurs only at the wind-up of fatal cases, and is always preceded by the extremest symptoms of blood-stoppage. Now in these three cases nothing of the kind existed: in the first two there was no dropsy whatever; and in the third the dropsy amounted only to a slight general puffiness, with an absence of any mechanical blood stasis. In neither of these cases did the mitral regurgitation perceptibly affect the systemic circulation.

To what then was the purpura due? In the first two cases to that special blood-poverty, that spanæmia, consequent upon and associated with the rheumatic condition, or rather to the friability and want of tone of the capillary wall consequent upon that blood-poverty. That this was so Dr. Salter felt the more sure because he had frequently observed and called attention to the association of the rheumatic and hæmorrhagic tendency in cases where no heart-disease existed, and had also observed that one and the same set of peculiarities of physique was common to both these tendencies. In the third case Dr. Salter believed the hæmorrhage was due to that blood-debatement that is always produced by chronic anæmia, from which the patient was suffering, and of which his anæmic condition was indicative; but he was not prepared to say that the impediment in the cutaneous capillaries, which is probably the immediate cause of kidney dropsy, had *nothing* to do with the vessels of the cutis giving way.

The occurrence of the purpura, in all three cases, in the lower part of the lower extremities, and the assistance which the recumbent posture evidently gave to the cure, point out how much gravitation had to do in determining the seat of the hæmorrhage. No doubt this is the reason why the shin is so much more commonly the seat of purpura than any other part of the body. Dr. Salter considered that the bandaging of the legs, in the third case, was of decided advantage.

LONDON HOSPITAL.

PURPURA NAUTICA IN A SAILOR, ASSOCIATED WITH HEMIPLEGIA ; RECOVERY.

(Under the care of Dr. LITTLE.)

As some authors consider purpura and scorbutus to be identical, although the general symptoms of each are distinct, we include the two following cases in our series, as illustrating phenomena common to both—namely, cutaneous hæmorrhage.

In the first case, the patient was a sailor, and had suffered from the privations at sea which give rise to scurvy. He was admitted with well-marked hemiplegia, which, considering his age, is a somewhat unusual complication. He, however, made a good recovery.