the elements of its own increase, and while the developing process has a resemblance in this respect to that of a voluntary muscle, there is no power in the heart, as in the arm, of securing rest, and the consequence is, a disproportionate increase of bulk in the overactive organ. The purpose of treatment, therefore, is to imitate the effects of rest on a voluntary muscle, and this is fully effected by the remedy prescribed above. It must be evident that a careful diagnosis is an important antecedent of treatment in these cases. Where fatty degeneration is supposed to be blended with the hypertrophied tissue, there is already a disposition to leipothymia, which should counter-indicate the use of the acid, and reasons might easily be adduced why no success could be anticipated from its employment when the heart is flabby as well as enlarged, and its tissue is infiltrated with the products of inflammation. These points are to be judged of by general as well as special diagnosis, and by the previous history.

The causes of a true hypertrophy are often accidental, arising most frequently from overeffort of the muscular system, and from the extension of rheumatism; these occur often in the healthy, and their effects are peculiarly susceptible of cure; but where the endocardium or the valves have undergone change the bruit remains after the preternatural impulse is arrested.

I will conclude by observing that the most promising cases are those which, while classed as presenting pathological phenomena, not only from errors of relative proportion of the part affected to the entire organ, but from the numerous disturbing causes which they introduce, must be viewed as resulting through physiological phenomena. There is probably as little relative difference between the hard muscular limb of a trained man, and true hypertrophy of the heart from mechanical obstruction, on the one hand, as there is between the flabby, voluntary, and involuntary muscles of the anæmic patient on the other. Indeed it may be shown that, in ordinary development from the foetal to the mature life of the heart, a law is observed similar to that which governs its hypertrophic increase. It is in fact found, that the various parts of this organ attain their due proportions in connection with the increased demand made upon them; the ventricles enlarge as the Eustachian valve becomes closed, the auricles having their development arrested as the foramen of Botal becomes opened, or in other words, the conversion of the ventricles from a single to a double organ, is attended from the third to the fifth month, with the establishment of that due proportion between the ventricles and auricles—owing to the increased activity of the former—which, in early foetal life, was wanting, affording a normal instance of an hypertrophy proceeding in one portion in relation to another, in the same organ. At the fifth month of foetal life the left ventricle is more capacious than its fellow, but the thickness of the walls of the heart is the same on both sides. But afterwards, when the function of the left heart is called into full action, the proportionate thickness of the wall of the left ventricle to the right changes rapidly; instead of remaining equal it becomes as four or even five to one.

ON

THE TREATMENT OF DIARRHŒA AND DYSENTERY BY SULPHURIC ACID.

By EDGAR SHEPPARD, Esq., M.R.C.S., L.S.A.

THE treatment of diarrhœa and dysentery by means of sulphuric acid, of which mention was made in the various medical journals some months ago, and the efficacy of which has since been confirmed by a few practitioners, has received in my hands the most rigid and severe experimental test; and though I am averse generally to obtrude myself, and the details of my practice, upon the notice of the public, I cannot, upon this occasion, refrain from doing so, inasmuch as the facts which I propose to state are so striking, and the evidence which I am about to offer so conclusive, (to my own mind,) that I think I ought to press upon my medical brethren the propriety of testing and comparing with the olden, this modern treatment—a treatment which (for what reasons I know not) has not yet received that support and countenance from the profession to which it is most fully entitled.

Though it is true that sulphuric acid, combined with some alkali, in the shape of a neutral salt, has been frequently administered in various forms of dysentery, I believe the exhibition of it alone, and uncombined, in indiscriminate cases of diarrhœa, to be perfectly novel.

During the last six weeks I have seen upwards of fifty cases of diarrhœa, many of them being severe, some few the very worst, forms of English cholera. In only one instance have I witnessed the failure of the acid treatment, and in that instance the chalk and astringent treatment was unsuccessful also. There was only this difference between the two systems:—the acid plan seemed to have no effect upon the disease, the chalk plan actually aggravated all the symptoms to a very frightful extent.

I propose in this brief paper, first to give my readers some idea of the character of the prevailing epidemic in my locality; secondly, I purpose detailing a few of the worst cases selected from my note-book; and, thirdly, I propose to draw a few practical conclusions from them as to the comparative advantages of the alkaline and acid modes of treatment.

I. The character of the epidemic which has been so prevalent in my neighbourhood during the last six weeks, has been as follows:—Great prostration of the vital powers; severe griping and pinching pains in the bowels, (not invariable,) greatly aggravated by drinking anything hot, greatly relieved by cold; tongue generally dry and furred, occasionally moist and red; distressing flatulence, the bowels being at times very much distended; burning thirst, and sensation of heat down the whole course of the alimentary canal, with (in some cases) incessant vomiting.

II. Case 1.—I. T., seized on the morning of August 1st with violent pain in the bowels, with vomiting

and purging—a most decided case of what is vulgarly called “*upwards and downwards*.” I was sent for about nine o’clock in the evening. He complained of intense pain, which had been greatly increased by his having swallowed, about half an hour previously, a cup of hot tea, although the stomach only retained it for about five minutes; pulse feeble, 120; tongue red and moist; feet cold; intense thirst and desire for cold water, which his friends would not let him have; had had about fifteen watery rice-coloured evacuations since the morning. Nothing would remain on the stomach. I immediately gave him a dose of the following mixture, which I had taken with me in my pocket, upon his wife’s description of the case:—R. Sacchari Albi, dr. iv.; Acid. Sulph. Dil., dr. ij.; Tr. Cardamom Co., dr. iv.; Aquæ Menth. Pip. ad., oz. vi. M. A fourth part to be taken every four hours.—The patient had no sooner swallowed the mixture than it returned. I then ordered some cold water fresh from the pump to be procured, when I allowed him to drink as much as he desired. He immediately swallowed three tumblers full, and expressed the most intense satisfaction. “The burping heat,” he said, “was quenched.” The pain immediately ceased. The sickness did not return. In about ten minutes time I gave him another dose of the mixture, with a pill of calomel and opium, one grain each, and left him with directions to continue the mixture every four hours, and drink as much water as he wished. The following day I found my patient quite well. There had been no recurrence of either the vomiting or purging.

Case 2.—Rev. T. S. is subject every summer, being a nervous weak subject, to attacks of dysentery, which leave him in a state of great prostration. I first saw him August 3rd. The dysentery had been on him for three days, and had not yielded to his usual remedy—the Mist. Cretæ Co., with a little Tr. Opii. Great pain in the bowels; subject to, and then suffering from, ascarides; tongue dry and furred; constant nausea. Ordered the same mixture as in case 1, which afforded immediate relief. The next day my patient was convalescent, suffering only from great debility. On the 5th of August he went to Gravesend for change of air; and I gave him an ounce bottle of the dilute sulphuric acid, with directions that he should take twenty-five drops whenever he was threatened with any return of the dysentery. Gave him a turpentine enema the night previously, which destroyed a whole nest of ascarides. On his return from Gravesend, Mr. S. stated that he had had several attacks, but that they had been immediately checked by the exhibition of the drops. He complained of the chalk mixture as having invariably “clogged” the bowels, and produced constipation, whilst the acid stopped the dysentery by increasing the tone of the mucous membrane of the canal.

Case 3.—J. Q., 2 years of age. Summoned to this child early in the morning of August 6. Incessant pain in the bowels, and purging for the last eight hours; skin cold and clammy; pulse extremely feeble,

and rapid; intense anxiety of countenance. In fact, the child appeared moribund, and the parents quite thought the case hopeless. They had given a little brandy, which had been immediately rejected by the stomach. I sent for a tumbler of cold water, which the child caught sight of, and requested to have. The little thing drank off the whole, and sunk back on the pillow quite exhausted. Ordered the following mixture:—R. Acid. Sulph. dil., dr. j.; R. Cardamom Co., dr. j.; Sacchar. Alb., dr. ij.; Aq. Menth. Pip., ad., oz. ij. M. A teaspoonful every hour. I called at two o’clock P.M., when the child was sitting up in its mother’s arms, eating a piece of bread and butter. The purging had quite ceased. Mrs. Q. said “the effect of the first dose was quite magical—the child altered for the better in about ten minutes.” On the following day my little patient was running about the room when I called. Being a delicate scrofulous subject, I prescribed eight drops of muriated tincture of iron three times a day.

Case 4.—T. L., aged two years and a half. Symptoms precisely analogous to those detailed in case 3. Saw this child on Sunday evening, August 29. Ordered mixture as above. All the symptoms immediately relieved.

Case 5.—Mrs. B., a lady from Devonshire, 70 years of age, taken ill August 26. I saw her on the morning of that day. Great uneasiness in the bowels, hardly amounting to serious pain; constant vomiting and purging; tongue dry and furred; fetid breath; pulse 100; abdomen tympanitic; great thirst. Ordered iced water *ad libitum*, and the following mixture and pill:—R. Sacchari Albi., dr. iv.; Acid. Sulph. Dil., dr. iss; Tr. Cardamom Co., dr. iij.; Liq. Morph. Bimeconat., m. xl.; Mist. Camphoræ, oz. vss. M. A fourth part to be taken every four hours.—R. Hydr. Cum Cretâ, gr. iij.; Pulv. Ipecac. Co., gr. ij. To be taken as a pill immediately. On the following day I found that my patient had obtained relief in the course of two hours. Only one evacuation since my visit yesterday; pulse 88; tongue moist, and not so much furred; abdomen less tympanitic; had passed a comfortable night. She said she believed the iced water had “done wonders for her.” Rapid improvement took place, and she left her for home August 31st.

Case 6.—Mr. J., seized with violent vomiting and purging August 29th. Intense thirst and burning heat down the alimentary canal. Had been persuaded to drink hot things, which had greatly aggravated the symptoms. Flatulence and severe abdominal pain. Ordered cold spring water *ad libitum*, which checked the vomiting, followed by thirty drops of the acid, with Tr. Cardam. Co. every four hours. Immediate relief.

III. The above cases have been selected from my note-book to illustrate the *rapidity* of the cure in the treatment by the sulphuric acid, as compared with that by chalk and opium. In every case that I have seen, with one exception, the amelioration in all the symptoms

has been equally rapid. This exception occurred in one of my own servants, a delicate young woman, 25 years of age. The acid treatment did not seem to do her much, if any, good, when I immediately resorted to the following mixture, (my olden form for the treatment of diarrhoea):—R. Cretæ pp, dr. ij.; Conf. Aromat., scr. ij.; Sp. Ammon. Aromat., dr. ij.; Tr. Opil, dr. j.; Tr. Catechu, dr. iv.; Aq. Menth. Pip., oz. v. M. A fourth part every four hours.

The first dose so aggravated her symptoms that I could not persuade her to take a second. I then returned to the acid treatment, in which she persevered for two days, being occasionally better, and then again as bad as ever. The symptoms at length yielded to the following combination:—R. Potass. Chlorat., Sodæ Sesquicarb., utrque, dr. j.; Tr. Cinchonæ Co., dr. iv.; Sp. Æth. Sulph. Co., dr. j.; Infus. Cascarillæ, oz. v. M. A fourth part every four hours. A glass of port wine twice a day.

In about ten cases out of the fifty entered in my notebook, I first tried the chalk and opium treatment, before resorting to the acid; in *only one* was perfect relief afforded. The vomiting has been so severe in the prevailing epidemic, that it would seem as if the stomach was unable to bear so nauseous a mixture as that of chalk and opium. And in most of the cases I have found the best, indeed the only efficacious plan to be, to relieve the intense gastric irritation by cold water, before resorting to the medical treatment. In some cases, if the stomach will bear it, the chalk seems to stop the diarrhoea, but to increase the nausea, and produce most uncomfortable sensations in the bowels on the day after its exhibition. This I have invariably observed in the olden plan of treatment.

The conclusions to be drawn from my experience of the sulphuric acid in the treatment of diarrhoea and dysentery, are as follows:—

1st. It is *more efficacious* than alkalies, opiates, and astringents, in a proportion greatly exceeding ten to one.

2nd. It is *more rapid* in its action, (especially in children,) in a proportion greatly exceeding twenty to one.

3rd. It seems to act in a more rational and (if I may so express myself) scientific manner, by increasing the *tone* of the mucous membrane of the alimentary canal, rather than by simply astringing its pores.

4th. The worse the case, the more rapid and marvellous seems to be the cure,—a most striking feature as compared with the treatment by chalk and opium.

I would urge, in conclusion, upon my medical brethren, the desirableness of giving this system a fair trial; and I would, moreover, advise them, instead of giving the acid alone, with water, to combine it with a little sugar and (most rare and excellent of all tinctures,) compound tincture of cardamoms, which seem greatly to relieve the so-frequent distressing flatulence. Unless the character of this autumnal epidemic should greatly alter, they will arrive at the conclusion, after having tested fairly the acid plan of treatment, that it does not

admit of comparison, but only of *contrast*, with the olden system.

P.S. Since writing the above I have seen one case in which the acid failed. Chalk and opium carried the day.

Enfield, September 2, 1852.

CASE OF CANCER OF THE PYLORUS UNDETECTED DURING LIFE.

By ANDREW PAUL, Esq., B.A., M.B., OXFORD.

To the Editor of the *Provincial Medical and Surgical Journal*.

SIR,—Your journal is not what it ought to be—a copious record of provincial medicine and surgery. Save from “smoky Birmingham” and “fair Leicester,” we have few, if any, cases recorded from our hospitals and infirmaries in the provinces. This is not as it should be. Surgeons like myself, “unattached,” meet with cases, valuable because instructive. We see them, as here, prior to admission, and, I am sorry to add, we see them when in despair they leave the hospital, as they say, to “die at home.” Without further preface, I rush at once in *medias res*, endeavouring, as far as I can, to give to the succeeding case, its history from the alpha of my acquaintance with it, two years ago, down to its omega in the *post-mortem*, conducted by myself, on Friday last, twenty-four hours after death.

I am, Sir, your obedient Servant,

(And a six months' Associate,)

A. PAUL.

Oxford, August 12, 1852.

John Higginson, aged 47, married, two years ago came under treatment for epigastric pain, flatulence, and costiveness. Complexion sallow; eyes dark, and unusually lustrous; conjunctiva and cornea of that pearly whiteness so familiar to us in consumption; has inguinal, omental, and ventral rupture on the right side. At this time I thought much of his pain was owing to the pull upon the stomach, as a volume of omentum was constantly in the sac. He had some aperient medicine, and I saw him, off and on, up to February last, when he was fairly brought to a stand still. I found him with obstinate vomiting; tympanitic abdomen; “gnawing clawing” pain in epigastric, right and left hypochondriac regions, with a sense of “balls rising up and down in his belly.” I cupped and blistered him. He had been salivated five years ago for the liver. I went through a *regiment* of stomachic opiates, creasote, bismuth, opium, oxyde of silver, hyoscyamus, conium, prussic acid, and chloroform, in vain. The only drug I found to give the longest relief, was the extract of *rumex aquatica*. This herb, if known to, is not prescribed by, the profession; it is powerfully astringent as to incised wounds. In operations