lemon juice is used, this being often so weak as scarcely to decompose the carbonate of potassæ. They may be kept put up as the sodaic and seidlitz powders are, with directions for their use—the acid in white, and the bi-carbonate of potassæ and sugar in blue paper :—

Powdered citric acid ℈i.
Bi-carb. potassæ ʒss.
Sugar, previously rubbed on lemon peel, or scented with ol. lemon ʒss.

Journal of Pharmacy.

CASES OF CHOLERA.

[Communicated for the Boston Medical and Surgical Journal.]

BY CHARLES HOOKER, M.D. NEW HAVEN, CONN.

FROM July 9th to September 1st 1832, ten cases of cholera came under my care, besides one case attended in consultation with Dr. T. P. Beers, and one with Dr. L. Keep. Of these twelve cases, 6 died and 6 recovered. From September 1st to October 25th, I attended twenty-one cases, including one case attended with Dr. Beers, and one with Dr. J. T. Denison. Of these 21 cases, 2 died and 19 recovered.

All of these cases were unequivocal and severe. Numerous other mild, though unequivocal, cases were prescribed for, particularly in the families in which the severe cases occurred. In nearly all of the severe cases I had the advice of Dr. Denison, and in several of them that of Dr. Beers, Dr. J. Knight, Dr. Thomas Miner of Middletown, the lamented Dr. Heermann, and other physicians.

In the first twelve cases the treatment was varied. The principal remedies were opium in frequent and pretty large doses, calomel in frequent small doses, stimulants, acrid irritants, and external irritants and heat.

In the twenty-one cases, subsequent to September 1st, the treatment was pretty uniform—consisting of *calomel* in very large and frequent doses, *camphor* in frequent small doses, *ice* frequently administered, and *external heat* and *irritants*. The first dose of calomel was from 20 to 60 grains, and the subsequent doses from 8 to 20 grains, repeated every hour, or every second or fourth hour—the amount and frequency of the doses being proportioned to the severity of the symptoms. From 6 to 12 drops of tinct. camphor (U. S. Pharmacopœia) were administered, in a teaspoonfull of cold water, every 5, 10 or 15 minutes. Ice was given ad libitum—in most cases a piece, the size of a large filbert, every 5, 10 or 15 minutes. The calomel was given in the form of a *dry powder*—being applied to the upper surface of the root of the tongue, and followed with a piece of ice, or a teaspoonfull of cold water.

The ordinary result of this medication was a suppression of the vomiting and purging, and, as observed by applying the ear or the stethoscope to the abdomen, *a complete cessation of peristaltic motion.* The calomel was evidently the most efficient agent in producing this result, for in two cases, in which neither camphor nor ice was administered, the large doses of calomel alone were followed with this cessation of the peristaltic murmur. The camphor obviously contributed to allay the morbid irritation of the stomach and intestines, and thus to check the evacuations :—it probably also had a favorable operation (which it cer-

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tainly has in some other diseases attended with a deficiency of nervous influence) in increasing the frequency and fullness of the respiration, and thus promoting the arterialization of the blood, and obviating the tendency to coma. The administration of ice, when the skin and the tongue have almost an icy coldness, seems at first view preposterous. In fact, however, it proved grateful to the patient, relieved the burning sensation in the epigastrium, appeared to equalize excitement in the system, and did not diminish the force of arterial action.

The fact that large doses of medicines will frequently overcome diseased action, and restore healthy action, when small doses of the same medicines will even increase the diseased action, has been frequently noticed by practitioners and authors. Mr. Corbyn, of the Bengal Establishment, in his late 'Treatise on the Epidemic Cholera,' has noticed this regarding the operation of opium and calomel. He remarks that 'calomel, in doses of from fifteen to twenty grains, is a sedative, and has the singular good qualities of immediately stopping violent vomiting and purging, removing spasmodic irritability, producing tranquillity of mind, exciting the secretion of the liver, and preventing the process of inflammation. I have known a patient, laboring under frequent dysenteric evacuations, with tenesmus, to be under the common course of small doses of calomel and opium for a fortnight without effect, and, strange to say, one dose of twenty grains of calomel at once stopped the purging, removed the tenesmus, and soon restored the bowels to their former tone. Calomel, in doses of from one to five and ten grains, acts as a stimulant [irritant], produces vomiting and violent purging,' &c. (Med. Chir. Rev. Jan. 1833, p. 65.) These comparative effects of large and small doses of calomel were strikingly exemplified in our cases of cholera. In the first cases, when frequent small doses were administered, the peculiar loud rattling borborygmi, so characteristic of this disease, continued unabated, and the evacuations seemed, for a while at least, increased. On the contrary, one very large dose of calomel seemed at once to overcome the irritative action—the vomiting, purging and borborygmi ceased, and a perfect stillness in the abdomen ensued. This cessation of peristaltic action commonly continued six, eight, or twelve hours after the administration of the first dose of calomel; when the stethoscope could detect a returning healthy peristaltic murmur, which, continuing to increase, was succeeded within a few hours by several grass-green or 'spinage-colored' evacuations, and the patient convalesced. In some cases vomiting occurred within a few minutes after the administration of the first dose of calomel, requiring a repetition of the dose; after which the calomel, camphor and ice were commonly retained without difficulty.

Of the 21 patients treated on this plan, 15 retained each more than 150 grains of calomel, within the first thirty-six hours after medication was commenced. Several cases were followed with a slight soreness of the gums, but in no case was there severe ptyalism. In no case was this treatment followed by excessive catharsis—indeed, in most cases, after the cessation of peristaltic murmur had continued six or eight hours, other remedies were administered to aid the cathartic operation of the calomel.

Most writers divide this disease into several stages, and recom-

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mend a particular plan of treatment for each stage. It is, however, not easy to distinctly define these several stages—the term *collapse* is usually applied to a state of general prostration or exhaustion ; but it is difficult to define the precise degree of prostration at which the collapse may be considered as commencing. In the severe cases our treatment was nearly the same, in whatever stage of the disease we were called. Several of our patients would unquestionably be considered as in a state of extreme collapse—lying for hours pulseless at the wrist, and with a general icy coldness of the tongue and the extremities. In some of these cases very moderate quantities of stimulants and acrid irritants—opium, brandy, capsicum, &c. were administered : these remedies, however, were not considered an important part of the medication, and in some of the severest cases were not used at all. In this particular, experience compelled me to renounce my preconceived opinions—opinions which were formed from the history of the disease in foreign countries, and confirmed by my observation of cases in the New York Hospitals, and which governed my practice in the first cases that came under my care.

One patient, a man about 40 years of age, intemperate, and of a broken down constitution, I found in a state of extreme collapse. He had had a diarrhœa for about five days, and during the last twelve hours the rice-water dejections were as frequent as every 20 minutes—vomiting frequent—spasms severe for the last four hours—countenance ghastly—tongue extremely cold—skin cold and livid—extremities shriveled—the characteristic faint hollow voice, and sighing moan—the pulse alternately imperceptible, and then feebly beating 150 or 160 in the minute. Sixty grains of dry calomel were immediately given, followed by two or three teaspoonfulls of cold water.* Within about fifteen minutes the patient vomited, rejecting a part of the calomel, when another dose of fifteen grains was promptly administered. Eight drops of alcoholic tincture of camphor were given in a teaspoonfull of iced water every ten minutes. A piece of ice, the size of a large filbert, was given every 5, 10 or 15 minutes, ad libitum. As in most other cases similarly treated, within twenty minutes from the administration of the first dose of calomel there was a complete cessation of the vomiting and purging, and of all peristaltic murmur. Admitting that only one half of the first dose of calomel was retained (and it appeared evident that in fact scarcely one quarter was rejected in vomiting), this patient retained 173 grains of calomel within the first twelve hours ; and within the first thirty-six hours, 216 grains. This appearing insufficient to effect a cathartic operation, the following cathartics were successively administered—Tinct. of Rhubarb ℥j. ; Elix. Salutis ℥j. ; Castor Oil ℥j. ; Croton Oil gtt. ij.; Calcined Magnesia ʒij. ; and 8 Seidlitz Powders—together with frequent enemata. The whole produced a moderate cathartic operation—the dejections having the ordinary grass-green appearance. The convalescence was rapid, during which a very slight soreness of the gums appeared, in consequence of the calomel.

* I am particular to mention the moderate quantity of drink, allowed while there was a tendency to vomiting—for in several cases serious harm was done by large draughts, which had the effect of exciting vomiting and thus rejecting the medicines.

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Another patient, attended by Dr. Denison and myself, a girl about sixteen years old, lay more than eight hours with no pulse at the wrist, and with the other ordinary symptoms of extreme collapse. A similar course of medication was followed with the same favorable results.

Of the two fatal cases, which occurred subsequent to the first of September, one was that of a very intemperate man, about 35 years old, whom I found in a low state of collapse. From the first, the case appeared very unpromising; and, owing to the extreme obstinacy of the patient, no regular course of medication could be adopted. He died about three hours after I first saw him.

The other was that of a girl, ten years old, who, without any premonitory symptoms, was instantaneously attacked with severe vomiting, purging and spasms. Soon after the administration of remedies, the vomiting, purging and peristaltic murmur ceased; but the pulse failed, coma supervened, and the patient died within five hours from the attack.

New-Haven, Ct. July 16th, 1833.

PURPURA HEMORRHAGICA.

READ BEFORE THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

BY W. CHANNING, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

I HAVE been informed by the Secretary that by a late vote of the Society it has become my duty to make, this evening, a written communication on some subject connected with medicine. I comply with this duty with pleasure. * * * * *

A variety of subjects presented themselves to me, when looking round for a topic for this paper, and I have selected from them a disease which is not of very frequent occurrence, and of which the following sketch may not be wholly without interest. This disease is *Purpura*.

Willan placed Purpura among the Exanthemata, and describes five species. Other writers have taken it out of this class, as it wants one of its elements, viz. fever, and as it is also destitute of the leading symptoms of inflammation, which also characterize that class. Purpura has been defined 'an eruption characterized by patches, sometimes of a vivid red, sometimes of a livid hue, the extent of which is sometimes only a line, and at others of several inches, preserving their color under pressure, usually to be found on the skin only, but also existing in some cases on the mucous membrane, in which case there are often hemorrhages.' This definition applies to the disease as presented in the varieties above referred to, especially the latter clause. In one variety, hemorrhagica, all the textures have been found invaded by it; even the serous and muscular tissues have not always escaped. I shall speak principally of Purpura Hemorrhagica.

The eruption in this species presents much variety. I have seen it very extensive, especially in the lower portions of the lower extremities. The skin here is almost everywhere covered with spots. Still they are distinct. Sometimes they are quite small, at others larger, not

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