

energy. Kolman, too, quoted by Hall,\* has shown that the right pneumogastric supplies the whole of the small intestines. "This is an inhibitory nerve," he says; "and Moreau and Lauder Brunton have demonstrated that the division of all the nerve going to a portion of intestine is followed by the secretion of a fluid just like rice-water stools of cholera. May not the stimulation," Hall continues, "of the inhibitory vagus be followed by results much the same as if the sympathetic supplying the small intestine were paralyzed?" In accordance with these physiological views, I have latterly treated every case of English cholera in the second stage by remedies applied to the pneumogastric nerve in the cervical region. with the satisfactory result of putting an end at once to the profuse vomiting and purging so characteristic of this stage. Arguing from its controlling effect in extreme cases of English cholera and cholera infantum, which our best authors say differ only in degree from the Asiatic type, I have every confidence that it will prove equally useful should the latter epidemic gain a footing in this country. There is another important indication, which will be subserved by counter-irritation over the vagus—viz.: the restoration of the cardio-inhibitory function of that nerve; thus the violent contraction of the heart will be controlled, the expansive power of its cavities restored, and the congestion of the pulmonary and arterial system put an end to. The application I have always used is the epispastic solution of the Pharmacopœia, applied freely with a brush behind the ear and on the neck as far as the angle of the lower jaw. No matter how violent the vomiting or purging I have never failed in stopping both by this application; a stimulating effect is produced at once and with it all gastric disturbances cease.

For the stage of collapse, which according to Claude Bernard, is due to great irritation and hypertrophy of the sympathetic nervous system, Dr. Hall, who has seen a large amount of cholera in India,† proposed to the Royal Medical and Chirurgical Society of London, on October 13, 1874, a plan of treatment which received the approval of the Society, as well as of Sir Joseph Fayer, who was present. He recommends the subcutaneous injection of a solution of chloral hydrate, 10 grains in 100 parts of water, in four or five different places according to the size of the syringe. If reaction does not commence in an hour, he injects again. The sedative soothes the contracted nerves and relaxes the contracted vessels; the blood is once more uniformly distributed, and consequently the pulse reappears at the wrist, the cramps and abdominal pains subside, sleep is induced, the respiration becomes regular, the discharges lessens, the face fills out, the voice becomes stronger, and the natural secretions are restored. Mr. Higginson, in his report to the Deputy Commissioner at Keri, Oude, states that he has treated nineteen cases of

cholera according to Dr. Hall's method, of whom seventeen recovered, being about 89 per cent. of cures. For purpose of illustration I append a statement of two cases out of many which I have treated during last autumn.

Case 1. *English Cholera*.—Constable C—sent for me on September 18, 1883, at 8.30 a. m. I found him in the act of vomiting, with small quick pulse, violent cramps, forcible palpitation of the heart, great debility, faintness, and coldness of the extremities. He was purged at frequent intervals and the dejections were of the rice-water character. He informed me that when on duty in the police-cells at 4 a. m. that day, he was attacked with profuse vomiting, followed in an hour by violent purging, with cramps, an attack occurring about every fifteen minutes. I did not order any medicine, but painted him at once in the hollow behind the ears down to the angle of the jaw with an epispastic solution, assuring him that he would not have any return of his symptoms. I visited him again at 10-30 a. m., and found him quite convalescent, not having any sickness or suffering, as I predicted.

Case 2. *Cholera Infantum*.—On September 24, 1883, I was summoned to see a child living in Upton street, Belfast, aged twenty months, at 11-30 p. m. I found it lying on its face across its mother's knee, with its arms and legs lying listlessly at either side; it was purging and vomiting at the same time. The child was almost pulseless, and was cold and feeble. The mother informed me that it had sickened at 6 p. m., and that it had vomited at least every quarter of an hour till the time of my arrival. She had attributed its illness to a mess of soup which it had taken the previous day. She had administered milk with lime water, without any benefit. I did not recommend any medicine, but having had the child placed on its back, I painted it with the blistering fluid behind both ears, informing the mother that from that moment both vomiting and purging would cease. Soon after the application of the remedy the child began to improve, the heat returned to the extremities, and at the end of half an hour it was fast asleep, when I left for the night. Calling at 10 a. m. the next day, I saw the child in its mother's arms, looking quite lively and well. As I foretold, both vomiting and purging had instantaneously ceased.

There is no need of multiplying examples; these two are the representatives of a great number, irrespective of cases of bilious vomiting and gastritis from alcoholism, similarly and successfully treated.

In the cases related I applied the remedy behind both ears; in several others I found the single application behind the right ear sufficient for the purpose; and this appears to me preferable to the double blister, as, from its powerful inhibitory effect upon the heart as well as upon the abdominal viscera, the modified application is perhaps the safer. In these cases of severe suffering any one can understand the satisfaction that is felt

\* British Medical Journal, vol. ii, 1884, p. 600.

† Ibid, vol ii, 1874, p 254.