the best remedy of the three, in such a state as the present, where styptic power, locally applied, might be fairly considered likely to prove beneficial. Meanwhile, cold beef-tea, of good strength, was given in small quantities at a time, and two ounces of port wine (in drachm doses) ordered conditionally, should the pulse give signs of failing strength. This stimulus became absolutely requisite, towards the evening.

§ 5. Under the treatment now succinctly described, Clarke gradually improved, so much so, that on the seventh day of her stay with us, I considered it perfectly safe to add a small quantity of sulphate of iron to her medicines, with a special view to the anæmia.* At a still later period, as you gather from the report, she took quinine with advantage; and, eventually, she was discharged on the twenty-third day after her hæmorrhagic seizure, in all respects in a better state of health than she had for a long period known. But her anæmia was of course not yet thoroughly removed, and her presumed gastric ulcer yet held its place. Under these circumstances, the plan sketched out for her future management was this: that she should change her occupation for one requiring less active exertion of the particular kind we have dwelt on to-day; that her diet should be mild and succulent; that spirituous drinks should be avoided, and, at the most, a very small quantity of bitter ale taken daily; that an issue should be placed in the epigastric region; and small doses of the citrate of iron and quinine taken internally.

§ 6. Among the symptoms of hæmorrhagic collapse worthy of note was the intense acuteness of hearing—such that the slightest whisper was distinctly audible to the patient at several feet distance. I have known this acuteness of hearing so excessive, in a case of hæmorrhage, that the mere rustling of a silk gown, at the farther end of a large room, has been productive of painful sensations to the patient.

Calculating from six observations made between the 5th and 16th of October, this woman passed a mean quantity of sixty-five ounces of urine in the twenty-four hours, of specific gravity 1019. During the latter half of this period, the fluid was of a pale straw colour, averaged eighty ounces in the twenty-four hours, and gave a mean specific gravity of 1015 only. It now had essentially the qualities of anæmic urine. The reaction was acid throughout. On the 5th of October crystals of oxalate of lime were discovered—crystals which, as we have repeated opportunity of observing, are peculiarly common in the anæmic state.

It is not without interest to collate the observations made on the frequency of the pulse and respiration. We find them as follows:—

Date.	Pulse.	Respiration.	Ratio.
Sept. 27 . . .	88	32	2.7:1
" 28 . . .	96	22	4.4:1
" 30 . . .	96		
Oct. 3 . . .	108		
" 4 . . .	114	30	3.8:1
" 11 . . .	120	24	5.0:1
" 16 . . .	128	34	3.7:1

From these numbers, it appears that from the first onset of the hæmorrhagic collapse the pulse rose in frequency, and almost by equal amounts at each rise—a result for which the statements of systematic writers on the subject would certainly not have prepared us. The frequency of respiration varied irregularly; and hence the ratio of the pulse and chest movements was unsteady. It is notable, however, that while the mean ratio of the five days was 4:1—one falling within normal limits—that existing during the height of collapse—2.7:1—signified a material acceleration (proportionally speaking) of respiration.

REPORT OF A CASE OF HYDROPHOBIA, AND POST-MORTEM EXAMINATION.

By GEORGE FIFE, M.D., Newcastle-on-Tyne.

ON the evening of Sunday, the 14th January, I visited, with Mr. Irons, F—'s child, a fine boy, aged five years, at Jesmond Vale, in the neighbourhood of this town. He had been unwell and drowsy on Saturday, but the first symptom of hydrophobia appeared on Sunday morning, when, on asking

for a drink, he was unable to take it, being immediately convulsed. Prior to my seeing the child, Mr. Paget and Mr. Irons had given it four grains of calomel, and draughts, each of which contained two minims of hydrocyanic acid. Leeches were applied to the mastoid processes, a blister to the nape of the neck, ice to the head, and an embrocation to the spine, composed of antimonial ointment and croton oil. In conversation with the above gentlemen in the afternoon, I advised the following powders:—Protochloride of mercury, two grains; tartarized antimony, opium, of each one-sixth of a grain. Mix. A powder to be taken every hour.

At half-past eleven P.M., I saw the child, with Mr. Irons, at which time he had taken three of the powders. The following symptoms then existed:—Extreme anxiety of countenance, with an evident expression of terror or apprehension; pupil dilated; restless motion of the eyeball, which was occasionally and rigidly fixed; occasional tetanic convulsion of the legs, accompanied with tremor, whilst with its hands it convulsively and constantly grasped the bedding; rigid spasmodic contraction of the abdominal muscles. The only complaint which the child made, and this only when asked, was that of pain of abdomen. Respiration hurried, gasping, and accompanied with the tracheal râle; thirst urgent; pulse 123, feeble.

The child had been bitten six weeks before by a strange dog, which was not known, and had not been subsequently seen in the village. On the right cheek, immediately over the projection of the bone, there are two marks, as of the teeth of a dog, perfectly cicatrized. On the nose, between the eyes, a small and imperfectly healed wound, around which the parts are slightly swollen and puffy.

On being asked to have a drink of milk, and it being handed to him in a small jug, he pushed it convulsively away, and gaspingly asked that it might be put into a cup, suffering at the same time from partial spasm, and the countenance expressing extreme alarm. The milk was at once poured into a cup, but when offered to it, the poor child begged that it might be put into a saucer, when the quantity was again made the ground of evasion. This objection being also complied with, the child at length convulsively and hurriedly seized the saucer; but the moment that the fluid touched the lips, it was pushed away from them, and violent general convulsion ensued, which, however, again very soon, almost immediately, subsided. On a piece of ice, of which the child appeared fond, being taken into the mouth, so soon as it became liquid, the same result was observed. We agreed to continue the powders, with a quarter instead of a sixth of a grain of the tartarized antimony and opium to each. We had chloroform with us, and would have employed it, but for the fact that there appeared too much prostration of the system to justify us in so doing, the pulse, though rapid, (123,) being at the same time very weak. The child remained during the night in much the same state, and sank at five A.M., the violent symptoms of the disease having existed no more than about twenty hours. The intellect remained perfect up to the last paroxysm, immediately after which the child died. This was proved by a remark made immediately before the attack—viz., "Mother! I am very nearly dead; I will soon die!" or words to this effect.

Sectio cadaveris, twenty-nine hours after death.—No unusual appearance of the corpse; the countenance placid, and the body and limbs possessing the rigidity met with in cases of death from ordinary causes. The scalp, on being detached from the skull, appeared exsanguined. The skull-cap being removed, the dura mater presented enormous vascularity, whether the arterial or venous system be regarded; the arborescent appearance of the former being beautifully distinct and general, whilst the engorgement of the latter was most apparent at the posterior parts, probably owing to position. The tunica arachnoidea presented the same appearance as the dura mater—i. e., extremely vascular; both exhibiting such a degree of vascularity as I never witnessed in any other case, not excepting those of the most acute meningeal inflammation. No effusion of serum, deposition of lymph, nor adhesions between the dura mater and tunica arachnoidea; longitudinal and lateral sinuses unusually free from blood. From the strength of the attachments of the dura mater to the skull, and the extreme softness of the base of the brain, it was found impossible to remove the brain in its envelopes; the dura mater was therefore opened, and the cerebral mass then removed. The pia mater exhibited the same vascularity in every part, but most especially where it dipped between the convolutions. When the brain was abstracted, a very small quantity of serum appeared in the base of the skull and upper part of the spinal canal, so small, however, in quantity, as to lead to the supposition of its being merely a post-mortem exu-

* The gallate of iron, resulting from the action of gallic acid on the sulphate, I believe to be a most efficacious combination.

dation. It was not determined at the time, whether such fluid had its site within, or external to, the dura mater, although most probably the former, as will appear from the state of the spinal cord. Horizontal sections of the brain being made, both the cineritious and medullary matter were highly vascular. The choroid plexus was not unusually engorged. No fluid in the lateral ventricles. The right corpus striatum slightly increased in vascularity, whilst the left, except at its anterior portion, was paler than natural. The third ventricle presented the usual appearance. The base of the brain softened to a mere pulpy mass. The cerebellum exhibited the same vascularity as that described in connexion with the cerebrum, and was somewhat softened. The medulla oblongata was more vascular than in the healthy state, and softened; neither, however, equalling the change in the brain and its base.—*Spinal canal, membranes, and cord:* The membranes showed increased vascularity. A considerable quantity of fluid was contained between the membranes and the cord, which last showed very little increase of vascularity, but was decidedly softened.—*Chest:* Lungs more vascular than usual, being of a dark rose-colour. Under the pleura, covering the lower lobe of left lung, and on its anterior surface, a small patch of emphysema. Some adhesions on the right side, but too strong to be considered of recent origin. Pericardium and heart quite healthy. Larynx and trachea healthy in every respect. The pharynx, throughout its whole extent, was of a deep dusky-red colour; and the mucous follicles enlarged, so as to present, at first sight, the appearance of large aphthæ: that these were merely enlarged follicles, the scalpel proved. One circumstance requires especial notice—the abrupt and marked limitation of the congestion, or inflammation, whichever it was, to the pharynx itself, between which and the top of the œsophagus the boundary was as distinct and defined as the line of separation in the case of gangrene. The œsophagus itself perfectly natural in appearance. Owing to this fact, and to the time occupied in the examination, the stomach and intestinal tube were not opened.

Remarks.—The foregoing report having received the concurrence and sanction of my friends Mr. Paget and Mr. Irons, to whose kindness I am indebted for seeing the patient, I will now offer a few remarks, suggested to my mind by a contemplation of the history and symptoms of the case, and the very extensive morbid appearances met with on examination after death.

From the extreme rarity of well-authenticated cases of hydrophobia, it may not be irrelevant to offer a few observations on the diagnosis of the disease, which shall now be done as briefly as possible. The only disease with which it can be confounded is tetanus; and perhaps the symptoms consequent on some narcotic poisons, especially the stramonium. On the latter cases it seems unnecessary to dwell, as although there may be difficulty of swallowing, there is no horror of liquids, beyond that resulting from such difficulty; besides which, the convulsions, when not relieved, are more permanent in their character, and generally very soon succeeded by coma—the intellect invariably more or less disordered or impaired. Attention to the history and symptoms will at once determine the question. Not so, however, with tetanus, which may arise from almost any injury, and not unfrequently does so, from causes much less serious than the bite of a dog, I myself having recorded a case, in which tetanus was caused by a simple abrasion of the skin over the shin-bone, and which case proved fatal in a very few hours.

In tetanus, the symptoms, although, so far as the general convulsions are concerned, there is generally remission to a greater or less degree, there is no absolute intermission of the spasms, the muscles of the jaw and neck, more particularly, remaining rigidly and permanently contracted, constituting trismus and opisthotonos. In fine, in tetanus, the spasms are constrictive or rigid; whilst in the disease under consideration, they are of a very different character, being, strictly speaking, clonic, i. e., temporary as to duration, unaccompanied by rigidity, and, above all, distinctly tremulous. This feature I particularly pointed out for notice to Mr. Irons, at the time of my visit to our unfortunate little patient. Without feeling justified in asserting the diagnostic value of the absence of any disorder of the intellect between the paroxysms, this circumstance is worthy of especial notice in connexion with the present case—in fact, even during the convulsive attacks, the child did not appear in the least degree insensible, but, on the contrary, held firmly by my hands, and seemed grateful for the assistance when the paroxysm was over. In conclusion: in hydrophobia, the mere offering of liquid to the patient is sufficient to excite the convulsions, or a feeling of dread; such is not observable in tetanus, however incapable the patient

may be of swallowing. On the treatment, I abstain from either remark or suggestion, as in the example before us, and in all others with which I am acquainted, all means have proved unavailing, after the disease having unequivocally declared itself. The post-mortem appearances now demand attention. From the report, one circumstance must strike the most cursory observer—viz., the inordinate and universal increase of vascularity of both membranes and organs within the skull and spinal canal; which, as already stated, infinitely exceeded what I have ever witnessed in any other case. The character of this lesion also deserves particular attention, as affording very striking pathological evidence in support of the views of my late lamented friends, Drs. Abercrombie and Kelly, on the Circulation of the Brain. On this account and on this point I shall be more diffuse than I otherwise would have been. As some who may read this may not be aware of the opinion of these two most justly eminent physicians, it may be right to state that, according to them, the actual quantity of blood in the brain was never either increased or diminished, however much its distribution between the arterial and venous systems might be deranged. My reason for alluding to this theory is, that some recent observations have been supposed to militate against it, if not to prove it altogether fallacious. In the report the vascularity is said to have been increased, whether the arterial or venous system be regarded; this, in the main, is correct, but requires important qualification in regard to the sinuses, which, in ordinary cases of cerebral congestion, form, as it were, reservoirs for such increase, whilst in this case they not only did not exhibit any degree of distention, but were comparatively free from blood, of which not more than a tablespoonful escaped during the whole examination, although no measures were adopted to prevent such occurrence. The arterial increase was most distinctly shown by the beautiful arborescent appearance of these vessels, and their vivid colour, when contrasted with the dark hue of the veins. This was most apparent in the membranes, although it existed in a modified degree in the cerebral mass itself, in which another peculiarity was observable—viz., a deficiency of those sanguineous drops which exude on cutting into it in ordinary cerebral congestion; and in their stead, florid-red striæ, which pervaded alike the grey and white matter, though most obvious in the former. In short, the vascularity appeared to preponderate in the arterial system, which, so far as my experience and observation extend, has not existed in any other case.

Was this inflammation, or its effect? I question it, and am supported in such doubt by the total absence of the ordinary results of inflammation, whether meningeal or cerebral, unless the softening of the base of the brain be regarded as such, which is hardly legitimate, seeing that, although ramollissement is frequently a termination of cerebral inflammation, it also occurs independent of such action, whilst in connexion with the membranes it is quite opposed to experience to believe that such a degree of inflammatory action could exist without the effusion of serum, the deposition of lymph, or the formation of pus. I may add, that in the cases where ramollissement of the brain occurs as a consequence of inflammation, I have invariably seen more or less pus.

On the condition of the medulla oblongata and spinal cord it is unnecessary to dilate, as the foregoing remarks apply as much to them as to the brain and cerebellum. The inflammatory view seems also invalidated by the total absence of fever and of mental disturbance during life. The only other appearance met with, which requires specific notice, is the state of the pharynx, more especially the sudden limitation of the inflammatory action to the pharynx itself, the abruptness of which has been already noticed.

One conclusion must be arrived at by a contemplation of the facts of this case—viz., that the peculiar symptoms of hydrophobia do not occur until the disease has attained to a certain degree of maturity. Of what nature the latent action is, or how the disease itself is produced, whether by absorption or the entrance of a specific poison into the blood, or through some peculiar impression made on the nervous system, I do not venture even to conjecture.

Newcastle-upon-Tyne, 1849.

INSTANCES OF SUCCESSFUL TREATMENT OF ASTHMA BY CHLOROFORM.

By J. LANGLEY BEARDSALL, Esq., M.R.C.S.,
Worksop, Nottinghamshire.

CASE 1.—The Rev. —, a clergyman of the church of England, thirty-seven years of age, has been suffering from