home for two months, returned for inspection. The auricular pulsation had then entirely disappeared, the epigastric impulse was imperceptible, and in the jugular veins the pulsation was almost unobservable. The murmurs were no longer audible, but the accentuation of the pulmonary second sound still persisted, and the venous hum was, although very faint, always present. Here, then, the patient had been almost cured, as many similar cases have been perfectly in our wards, and in a few weeks more no trace of her malady will remain.

HYDROPHOBIA OR ITS EIKON—WHICH?

By HUGH NORRIS, L.R.C.P. & S. EDIN.

MR. L—, aged forty-two, a temperate, robust man, of strong will and great energy, and endowed with a considerable amount of moral courage, whose only ailment for many years had been an occasional attack of pulmonary congestion, confining him sometimes to the house, but seldom if ever to bed, is the subject of the present paper. He inherited a weak heart from his father, and the first attack of congestion occurred about seven years ago, as the result of prolonged exposure to cold and wet. In November last he kept a Danish bitch, which suddenly became ill and strange in its behaviour, and so irritable that its owner was suspicious of its impending madness. On the 13th of that month he came to me in the evening in a state of extreme perturbation, saying that the dog had bitten his son, a lad thirteen years of age, informing me then for the first time of the dog's indisposition. I immediately visited the boy, and, finding a small abrasion not larger than an ordinary pin's head on the tip of his nose, I freely cauterised it with nitrate of silver. I desired that both dog and boy should be watched—the former to be tied up in a safe place and fed as usual, and the latter to have all the air and exercise that seemed good for him. The father was excessively disturbed at the circumstance, and his nervous system appeared to be much shaken by the bare thought that it was possible his son might have hydrophobia. Several times within two or three weeks he came to consult me about his boy, sobbing hysterically when speaking of the suspicion that was uppermost in his mind; the lad all the while appearing as well as usual. The dog seemed at first to improve, and was once at least taken out by its master, but, on that occasion manifesting behaviour still more strange and vicious, was killed within three or four days (so far as I can learn) of its first showing signs of indisposition.

Mr. L— had latterly undergone some business worries, and was not quite himself; he always appeared to be thinking about his boy, and suffered much in consequence from want of sleep and rest by night. He took a journey to Bedford, a distance of 200 miles from home, and spent his Christmas with friends, ostensibly for the purpose of bringing home a youth as companion for his son, hoping the resulting pleasure would excite the boy's nervous system, and help to keep him in health. Whilst there he is stated to have resumed his wonted spirits, and to have apparently enjoyed himself thoroughly. He returned the whole distance on Wednesday, the 27th of December last. Two days later he attended a weekly market nine miles off as usual, but got very wet, and on the following day (Saturday), he drove a long business round in the boisterous weather that marked the end of the year.

On Sunday morning, the 31st December, I was first called to see him. He complained of sore-throat, and pain on the right side of the head and neck. This side of the pharynx and uvula was relaxed and redder than usual; his pulse was not counted, but it was observed to beat, though not quickly, yet with a nervous thrill, and the skin was moderately cool. He stated that he had not slept a wink since Thursday; also that he had lain awake "hundreds of hours" by night since his boy was bitten. I applied solid lunar caustic to the throat, and gave a chlorate of potash and steel mixture every four hours. He also had a dose of castor oil, which acted very well during the day. At night, finding him

nervous about himself, and still wakefully inclined, I gave him forty minims of nepenthe in camphor mixture.

Jan. 1st, 1877.—On my morning visit, I found that he had no sleep whatever during the night, but he said his throat was better. He was less nervous, and he took a black draught, under the impression that his bowels had not been sufficiently relieved on the day previous. I saw him again in the evening, and found that the draught had acted well. His pulse was about the same. He was, however, very nervous and excitable, and could but just barely drink any sort of fluid. During this visit he for the first time told me that the dog had also bitten himself on the right side of the forehead, about the same time as his son, which was on November 13th; that the bite drew no blood, nor was the skin broken, but a deep "dent" was made on the surface by the blow from the dog's tooth. On examination, I could not detect the vestige of a scar. This information he gave in an excited but mysterious manner, watching his wife momentarily out of the room, jumping from his chair, and hurriedly whispering the fact in my ear. I ordered him seventy minims of nepenthe, which he took very soon after my departure.

2nd.—Not having had a moment of sleep during the night, he got up in a very excited state, and sent for me at 8.30 A.M. He had tried to drink a cup of tea, but could not swallow more than a few drops, and was so agitated that he dashed both cup and saucer to the ground. I was obliged to go at once into the country to a case of difficult labour, so I soothed him by words as well as I could; and, returning at 11.30, I immediately held a consultation with my colleague, Dr. Harvey. His skin was then cool; his pulse only sixty; his pupils normally dilated, and acting well; his urine scanty and very alkaline. He was perfectly rational, but was greatly agitated on being desired to drink. When he strove to do so he only swallowed a few drops, and his eyes seemed almost bursting from his head in his ineffectual efforts to accomplish more than that. He was also frequently spitting about the house—a circumstance the more noticed by his family because in health he was most particular about such matters. He even more than once during his illness spat over the coverlet of his bed. There was nothing unusual, I believe, in the appearance of the sputa, which consisted apparently of ordinary saliva and mucus. Three minims of the hospital strength of solution of morphia were injected subcutaneously at 12 o'clock at noon, but this dose producing no sleep by 1.30 P.M., two and a half drops more were injected, both into the arm. At 3 P.M. the morphia took effect, and he slept stertorously until 8 P.M. During this period of five hours he was evidently deeply narcotised, and lay on his back, with his arms spread almost at right angles with his body. I should have been alarmed at his condition, the pulse being weak, and the skin cold and clammy, but that I found him readily wakeable, his pupils, however, being thoroughly contracted. When he awoke he appeared refreshed, but could swallow half teaspoonfuls only of arrowroot and brandy. At 10 P.M. he got excited again; the pulse was 108; the skin still clammy, but warm. I injected fully two minims of the same anodyne as before. He was now very thirsty, and wanted to drink some liquid, but could only get it down in very small quantities. Even these produced such spasmodic effects that he would not persevere in attempting to swallow them. I accordingly ordered calfs'-foot jelly with brandy and some blanc-mange to be sucked away. Since Monday (the 1st) his tongue has been quite white and sodden-looking, not appearing so much coated and furred as white through and through—a condition I do not remember ever to have observed before. On this day there appeared very great tenderness, or rather painful sensitiveness, over the whole scalp. He likewise shrank from and complained in a very irritable manner of the smallest draught, or the slightest breath of cold, or even moving air. These sensations lasted until the commencement of the railway journey hereafter mentioned.

3rd.—The patient was still in the same condition, but with a very varying pulse: ex. gr., at 9 A.M. it was 96; at 3 P.M., 84; at 8 P.M., 88; at 11 P.M., 108. At 11 A.M. I gave him a strong chloral and bromide of potassium draught. When I suggested his taking it, he said he feared he could not swallow; but on my urging him to try, he replied, "All right, I will take it, but you must call down two of my men to hold me, and you shall drench me. That's the only way

I can take it." This I declined doing, and he took the draught at intervals with difficulty by teaspoonfuls only. He was somewhat composed by this, and said he felt better. After the draught his urine was intensely acid. Towards afternoon he was able to swallow fluids a little better, but still only with a teaspoon. At 11 P.M. I injected three minims of the anodyne as before. This produced about five hours' sleep.

4th.—He rose very early in the morning and ate a rasher of bacon and an egg, and said he enjoyed them and felt better. On this day he had a fancy for washing his head with warm water in which a small quantity of alum had been dissolved, with a view to allaying, as he said, the painful irritation or sensitiveness of the scalp, which he always complained of as the cause of his not being able to take rest, and which always made him wish to get up the instant his head was laid on the pillow. He had his hair cut at my request before bathing his head, and said he was somewhat relieved by what had been done. At 3 P.M., being still restless and very imaginative, I gave him another strong chloral and bromide draught, containing sixty grains of each, to be taken by teaspoonfuls as he best could, through the afternoon. Of this he took rather more than half, and appeared better until the evening, when, on my telling him that he could not be suffering from hydrophobia, or he would have felt worse instead of better, he acquiesced in my opinion; but I think this comforting conviction was only momentary. At 8.30 P.M., having been since my afternoon visit more restless and somewhat wandering in his mind, I injected three and a half minims of the morphia solution. This produced only ten minutes' sleep, and when he awoke at 9.30 he was intensely excited and suspicious, and disposed to be somewhat unmanageable. He was now evidently in a state of mania, loudly accusing his wife of infidelity with several of his friends, an idea which seems never to have wholly left him. On my remonstrating with him he became very violent, and threatened to flog me with a heavy stick, which he laid hold of for the purpose. He went to bed, but not to sleep, for he spent the whole night in dressing and undressing, which he did at least twenty times, and in packing his portmanteau for a journey, which he meant to take in the morning.

5th.—In anticipation of his projected journey, he had his hands lightly washed in warm water, as well as his face, but he submitted very impatiently to have the water applied to the latter. He was most anxious to commence his journey with his wife and her sister, but did not much care whither he went, naming both Exeter and Bournemouth. At 9 A.M., being then very wandering, somewhat excited, and highly suspicious, he was seen by Dr. Harvey and myself with a view to his removal to an asylum. His pulse was then 108 and weak. He had taken little or nothing through the night, but now ate some calf's-foot jelly somewhat eagerly and hurriedly, standing. About midday he swallowed some arrowroot and brandy by teaspoonfuls only, throwing away a dessertspoon which was offered him, after an unsuccessful attempt to swallow that quantity, and resuming the use of the teaspoon. The latter quantity he now repeatedly swallowed, without apparent effort and without spasm. He then, as always during his illness, assumed the standing posture when swallowing, and would invariably get out of bed, if liquid food was offered him there, before attempting to swallow it. He then braced himself up, as it were, by throwing out his chest, fixing his shoulders, and placing his feet apart, as if preparing by a strong effort to accomplish some great feat.¹ At 1 P.M. he started for Fisherton Asylum, Salisbury, his friends allowing him to indulge the idea that he was going to Bournemouth. At 4 P.M. he reached his destination in safety. The journey was accomplished pretty quietly with his wife and sister until about half-way on the road, when he became excited, kicked at his wife, and threatened to thrust his hands through the window. The train entering a tunnel at this instant he became very quiet as if cowed; but at the next station he tried to get out, and kicked at the railway officials. Myself and a companion, who travelled in the

next compartment as a precaution, but unknown to the patient, now entered his compartment, when he became very quiet for the rest of the journey, but was evidently much disconcerted on recognising us. Strange to say he did not once complain of feeling cold during this journey, though he put on a second overcoat shortly before its completion. He had suffered much from tenesmus all the morning prior to starting, but did not appear to be at all uncomfortable from any such symptom whilst travelling. At 4.30 P.M. he was lodged in the asylum, and we left him.

I afterwards learnt that he was very noisy and violent all night, requiring two attendants to sit up with him. He had no sleep, but in the morning he took tea and bread and butter once, though reluctantly and resisting.

6th.—He was very violent and shouting all day. The bowels not having been moved since the 2nd, he had an aperient, which appears never to have acted, but with a view to encourage such an effect he was placed on a night-stool. Whilst there he suddenly fainted, but there was no stertor or sign of apoplexy. He was put into a warmed bed with hot blankets, and with a feeder took some brandy-and-water, rallied and spoke rationally. Small frequent doses of stimulants were continued, but he very soon again became unconscious, and died at 7 P.M. on the seventh day of his illness.

An autopsy disclosed a thin and flabby heart; there was thickening and desiccation of tissue in the stomach, but no ulcer or escape of its contents into the peritoneum; the edges of the liver were blue, but there was no nutmeg lesion; the lungs and kidneys were healthy; the head was not examined. The immediate cause of death was presumed to be cessation of the large, thin, flabby heart's action, resulting from exhaustion, consequent on the previous nervous or cerebral excitement.

South Petherton.

CASE OF HYDROPHOBIA.

DEATH ON SEVENTH DAY.¹

By RUSSELL STEELE, L.R.C.P.E. & M.R.C.S.

(With Remarks by Dr. DYCE-DUCKWORTH.)

On July 4th, 1876, shortly after 7 o'clock in the morning, the patient, A. C—, a little boy aged nine and a half years, was playing with a strange dog, which bore the marks of bites about its muzzle, and was several times bitten by it on the right hand and leg. Very shortly afterwards he was brought to my surgery, when I cauterised the wounds freely with nitrate of silver. He came to see me twice afterwards to have the wounds dressed with water-dressing, after which they healed up.

On the 18th of August (six weeks and three days from the date of being bitten) it was noticed that he seemed tired, and not in his usual health.

On the 21st, after a good night's rest, and having had a hearty breakfast, he went with a number of children on an excursion to Dover. Was very anxious to go, yet feared that he should be too tired to do so, which was unusual for him. About 11 o'clock, whilst on Dover pier, he complained of the sight of the water making him feel unwell, and of his "feet feeling so light." He drank a little tea and ate some bread and butter, directly afterwards asking for some water, but was unable to drink it. He "snapped at it," as his brother expressed it, but could not swallow a drop. Expressed a wish to rest, so was put to bed from one o'clock till half-past five, when he returned home. On his arriving home he was offered some cocoa, and also some whisky and water, but he said he was only tired, and wanted to go to bed. He slept well till six o'clock the next morning, when he was restless, and complained of pain at the pit of the stomach. There was no complaint of pain in the cicatrices of the bites. His mother got him some castor-oil and milk, but he was unable to swallow it. There was no thirst, but complaint was made of pain in the

¹ In books this nervous disturbance is often described as a "spasm," but the best example I can offer of the difficulty of inspiration excited when my patient tried to swallow fluids is that hurried or intermittent gasping one sees in a child attempting to drink when sudden thirst has been induced by recent violent exertion. This peculiar disturbance of respiration was observed to precede as well as succeed the effort of swallowing.

¹ Read before the South-Eastern Branch of the British Medical Association, October 12th, 1876, at Reigate.