of warm water) were introduced into the sixth interspace, in the axillary line, and, immediately after the first ounce or two had passed, the respirations became less hurried. One pint and a half of clear straw-coloured serous fluid were withdrawn. There was complete re-expansion of the compressed lung, and, on listening, the respiratory murmurs were distinctly heard. Shortly after the operation, the little patient lay comfortable on the sound side, slept, and passed a good night.

March 4.—He expressed himself as quite well; pulse 120. Vesicular breathing was well heard. There were no signs of any re-accumulation of fluid.

March 6.—The respirations were quiet; there was no difficulty or pain during respiration, or when turning from side to side; pulse 100. In the evening he had two slight rigors, shortly followed by several watery stools.

March 11.—He continued to improve; pulse 90. He had no pain or uneasiness, and felt stronger. His appetite was good.

March 18.—During the last four days he had been going about the house without any difficulty or accelerated breathing.

March 22.—There was no shrinking of the walls of the chest, or evidence of the reaccumulation of fluid; the respirations were normal.

This case has been recorded as an example of the beneficial effects of the early performance of paracentesis thoracis in cases of acute pleurisy with effusion. From the time of the operation there has not been one unfavourable symptom, showing the avoidance of the formation of adhesive bands, with the gradual contraction of the affected side, and diminished power of expansion, occasionally accompanied with a partly carnified lung. Up to the present time (September), he is in excellent health.

HEADACHES IN CHILDREN.*

By W. H. DAY, M.D.,

Physician to the Samaritan Free Hospital for Women and Children.

In considering the subject of headaches in children, I may reasonably be accused of selecting a symptom which in some cases is the leading feature of intercranial change, and at others merely an indication of passing functional disturbance.

Diseases of the brain, whether organic or functional, are most deceptive, and difficult of detection and diagnosis. They are prone to run their course rapidly, and to terminate in death when we least expect it. They affect the mind, and may be said to influence every mental operation, concerning which our views are still speculative and open to controversy. In health and in disease general facts are required to take rank with some of the established laws of Nature, or we shall be in danger of giving to the world endless hypotheses and theories. Sound opinions, based on deductions from the conduct of Nature in disease, are the only principles on which we can depend.

Headaches at all ages and in both sexes are so common that, in the absence of cerebral disease, they barely attract our notice, and the sufferer thinks it useless to consult us. Looking at the grave termination of cases in which headache has been the chief symptom, I have thought the subject deserving especial notice. In the young and in the old they are significant, and possess a meaning which should put us on our guard, and prepare us to be ready for mischief, of which this symptom is sometimes the prelude.

In addition to the commonest varieties of headache that attack children, there is a peculiar functional form, of which numerous examples had come under my notice. I think no more suitable term than functional could be found to convey a meaning for those intricate changes of structure to which the nervous system is especially prone. I say change, because it appears to me that some change—physical, structural, or chemical—does take place in most, if not all, nervous affections, however passing and slight they may be; and it would be conceded that it is so in childhood, when the circulation is active and the brain is undergoing rapid development. I am disposed to think that, with excess or diminution of action in a part, which we call functional disturbance, there may be associated some essential change not capable of detection. Simple congestion, constantly met with in disturbance of function, is sometimes the forerunner of exudation and morbid deposit, or of alteration of texture. Some diseases of the liver impede the circulation through the veins, and lead to effusion of serum and dropsy; long-continued congestion of the kidney, caused by habitual exposure to cold and damp, may induce nephritis, and end in granular degeneration.

Abstract of a paper read before the Harveian Society of London.

We may proceed to inquire "What is headache? What is the degree and character of change that will produce it?" We are not sure of the exact pathological conditions of headache; we cannot say that in this case or in that case the brain is congested or anæmic, because these changes sometimes exist without it. Tumours and abscess of some portions of the cerebral mass have been discovered, on *post mortem* examination, when no headache has been complained of during life. In such cases the morbid change has occurred slowly, and the brain has thus become tolerant of the pressure. Time permits the circulation to accommodate itself to the deposit, which it would not do in any sudden lesion, as a small extravasation, for instance. We may, however, generally affirm with safety that organic disease of the brain at least is attended with headache, vertigo, giddiness, convulsions, or some disturbance of function in the cerebral hemispheres; if not invariably amounting to headache, then to some confusion or abnormal sensation, which shows that the brain is involved. We shall generally find that uneasy sensations, if not actual pain, are the accompaniments of alteration of structure within the brain, whether there be morbid growth, chronic softening, or the changes due to inflammation.

Headaches calling for separate discussion are found under the titles—1. Cerebral headache, attributable to injury. 2. Gastric or sick headache. 3. Headache from anæmia and neuralgia. 4. Headache depending on plethora or fulness of blood. 5. Headache depending on some intricate change in the cerebral membranes or tissues of the brain—a condition amenable to treatment at an early stage. 6. Epileptic headache. We may incidentally mention the severe headache of fever, especially in the young and robust sufferers from typhus. Headache is severe and continuous in relapsing fever, and sometimes in typhoid fever.

Of the form of headache depending on some peculiar cerebral change, it may be observed that there is occasionally, but by no means often, some enlargement of the head; and, if this state continue without improvement, it is apt to grow disproportionately to the rest of the body, and the extremities waste, the muscles become flabby, and the joints loose. The enlargement of the head is mainly noticeable at the upper part of the forehead and occiput, and sometimes at the sides of the head immediately above the ears. The increase of size is symmetrical. The leading symptoms are pallor and debility, restlessness at night, irritability by day: sometimes these little patients are sullen and indifferent to what is going on; at others, very fidgety and quarrelsome on the slightest provocation; there is sighing and yawning, and exhaustion is marked in every act. What are the changes that take place within the cranium? Is the brain simply exhausted? Is its texture softer than normal? and has excess of fluid replaced any portion of the solid mass? Headache is the symptom which, beyond all others, prompts the parents to seek our aid, and which first draws their attention to the child's state. The cause of all the mischief is located in the brain or its membranes. The slow and sometimes irregular pulse, with dull and persistent headache, taken with other symptoms, makes us fear the approach of organic disease. The temperature is normal, and, if the cases be seen early, they recover.

As to treatment, most forms of headache are unsuited to tonics at the beginning. In the last class of cases, they may be said invariably to aggravate the mischief, till the system is prepared to receive them. Certainly headache of cerebral origin, which disturbs secondarily the nutritive processes, will be increased by the attempt; and, if the stomach be primarily at fault, we shall be equally disappointed with steel wine and bark. In all cases of the kind which I have last described, the latter remedy had to be carefully added, and in many instances, even in small doses, it had to be relinquished. Bromide and iodide of potassium act as specifics in the early stage; but, when once the headache is relieved, their continuance would be too depressing, and iron and cod-liver oil must be employed to complete the cure.

CASE OF HYDROPHOBIA.

By NELSON C. DOBSON, F.R.C.S.,

Surgeon to the General Hospital, Bristol.

At this time, when the subject of hydrophobia is being discussed not only in the public press, but also in the medical journals, the following notes taken from my private note-book of a case which occurred at St. Thomas's Hospital during the time when I was house-surgeon may be interesting, especially as I saw the man from beginning to end—that is, at the time when he was bitten, and also when the symptoms to be presently detailed occurred.

John Wells, a working engineer, aged 57, a somewhat pale but hearty-looking man, who had always been temperate, applied for

treatment on August 15th, 1865, at 5.15 A.M., suffering from the bite of a dog. He stated that whilst walking to his work near the Walworth Road Station, he noticed a large dog, "half Newfoundland and half mastiff," making towards him. He perceived nothing unusual about the dog, but suddenly the animal seized upon his arm. He struggled with the dog for several minutes until another man came to his assistance, who, after having been severely bitten, succeeded in beating off the dog. The man Wells had a large wound on the front and back of his right forearm. The wounds were deep, and appeared to correspond with the large canine teeth. On the left forearm there was also a wound on the outer and inner side, and an extensive and deep scratch on the back of his left hand. Nitrate of silver was applied freely to all the wounds, and produced considerable sloughing. The wounds gradually filled up, and he ceased to attend at the end of seven weeks.

On November 23rd, 1867, in the evening, he again presented himself at the hospital, complaining of a general uneasiness. He stated that he had not been able to take either fluids or solids during the day, and I found that an attempt to do either produced a deep sighing and paroxysmal inspiration. The mere action of lifting his hand to his mouth produced the same symptoms. He said that he first began to feel uneasy on the previous morning, that he vomited a little, and did not sleep all night. There was no difference in the cicatrices since he had been feeling unwell, and there was not the slightest pain or uneasiness in them. His tongue was furred. The bowels acted to-day. Temperature 97.2 in the left axilla; pulse 100. I recommended him to come into the hospital at once, which he did, and was placed in a private ward. Soon after he was in bed, I noticed a short paroxysmal cough attended by some yawning. I also noticed the first actual convulsive "catchings" in his respiration. The attacks lasted about two minutes (he stated that they occurred about every thirty minutes). They produced some perspiration and fatigue. He exhibited no particular anxiety, and persistently asserted that the animal which bit him was not mad.

At 12 P.M., three hours after admission, the paroxysms were more frequent and more violent. Pulse 120; temperature 99. There was very evident distress and anxiety of countenance. The skin was bedewed with perspiration. The very mention of drinking induced a paroxysm. He had a subcutaneous injection of twenty minims of liquor morphie.

November 24th, 5.30 A.M.—Pulse 100; respiration 20. The intervals of quiet were not more than a minute. The paroxysms were more violent. He had not slept.

10 A.M.—The paroxysms were evidently increasing in severity and frequency. There was much anxiety and distress. He had great difficulty in breathing, and during each attack he placed both hands on each side of his chest, evidently having pain there; but his chief complaint was referred to the upper part of his throat. He was quite sensible of his condition, and stated his feelings to be those of uneasiness of an indescribable character, which he seemed to refer chiefly to his respiratory organs. Mr. Solly saw him, and suggested, in addition to his present treatment, a subcutaneous injection of three grains of quinine every four hours. During the night he had had enemata of beef-tea and brandy.

1 P.M.—There was a very decided increase in the frequency and severity of his attacks. He jumped out of bed suddenly, and struggled hard for breath. The attacks last from thirty to sixty seconds; during their interval he lay perfectly still, his respirations being very shallow, his inspirations particularly being attended by a peculiar and sudden catch. Pulse 120, small and thin; respirations 20; temperature in groin 99.2. There was no undue sensibility of the surface of the body. During the attacks the mouth was widely open, and the eyes looked as if starting from the orbits. He had no fear of death, though conscious of its near approach, and prayed fervently to be released from his suffering. Tracheotomy was suggested, but was not carried into effect. He had an injection of beef-tea and brandy with forty minims of liquor morphie. He occasionally seemed to wander, but generally was quite rational. Chloroform was attempted to be given him, but as it caused an increase in the violence of the paroxysm, I was obliged to desist.

9 P.M.—There was now for the first time a little frothy saliva about his mouth. He was rapidly becoming weaker. The hands and feet were cold; the skin clammy; pupils widely dilated; respirations 23. He died at 10.30 P.M., about twenty-five hours after his admission, fifty hours from the commencement of his symptoms, and a hundred and two days from the infliction of the bite. I believe a *post mortem* examination was made, but I have unfortunately no record of it.

REMARKS.—It is worth bearing in mind that, though at least half a dozen persons were bitten by the same dog as the patient Wells, yet, so far as I could ascertain, no one else suffered. That the foregoing is a genuine case of hydrophobia I have no doubt; its oc-

currence in spite of free application of nitrate of silver within a short time of the bite, might lead one to doubt the efficacy of cauterisation. Hydrophobia is, I believe, a much rarer disease than is generally supposed; there is, nevertheless, a wide-spread dread of it. One of the coroner's jury who heard my evidence at the inquest on the foregoing case, applied the same evening at the hospital, declaring he was suffering from hydrophobia. He was speedily cured by two scruples of sulphate of zinc, he having spent his juryman's fee unwisely. The dog which had bitten Wells was killed, and I could obtain no further evidence as to its rabid condition—suffering the same fate which Goldsmith graphically describes as befalling all dogs supposed to be mad.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

CASES OF HEART-DISEASE: WITH REMARKS.*

(Under the care of Dr. BROADBENT.)

CASE III. *Mitral Constriction*.—John W., aged 24, a carpenter, was admitted on January 29th, 1872. He was pale, thin, and anxious-looking, and extremely excitable and nervous. He had had acute rheumatism three years before, had been subject to colds and coughs, but had been pretty well till three weeks before his admission, though his breath was short and his work too much for him. He then had pain and swelling in his knees and ankles, which was still present to a slight degree when he entered the hospital; but there were no marked general symptoms of rheumatism. He was subject to palpitation, and almost always had an attack when examined; could not lie down with comfort, and in bed always placed himself on his right side, with his elbow on the pillow, and his head on his hand. The pulse was weak, irregular, variable in force and frequency. The heart's action was visible over an extended area, and powerful to the feel, especially when the patient was excited; the apex beat in the sixth space, about three inches below the nipple, and to the outer side of the nipple-line. There was dullness for an inch to the left edge of the sternum in the second and third spaces; occasionally a faint thrill perceptible here; no impulse. A distinct vibrating thrill was felt at and within the apex, leading up to the impulse. Just within the apex, a vibratory murmur was heard, which began gradually and without accent, and terminated in a loud short sharp sound—the only heart-sound here audible. This murmur was audible upwards and inwards, becoming gradually weaker as far as the third space; it was not heard to the left of the lower sternum. Over the base of the heart, a sharp first and muffled second sound were heard. On carrying the stethoscope downwards little by little, the second sound was gradually lost, but it had not disappeared when the murmur became audible; so that at one point there were heard the murmur and two sounds, and it was now perfectly clear that the murmur ran up to the first sound and was presystolic.

All the interest of this case consists in the determination of the valvular lesion, and a detailed report is unnecessary. He remained in the hospital till April 5th, gaining strength, flesh, and colour, and becoming less nervous, under the influence of rest and good food, aided by quinine, iron, and cod-liver oil.

Mitral stenosis or constriction has attracted much attention within the last few years, and various methods have been recommended for determining the relation of the murmur to the movements of the heart. The difficulty in timing the murmur consists in the fact that in these cases the second sound of the heart is not heard at the apex; and the first is changed in character, becoming short and sharp, so as to resemble the second; while, in ordinary mitral regurgitant disease, a systolic murmur takes the place of the first sound, which is inaudible or indistinct, the second sound being heard; so that, in both obstructive and regurgitant disease of the mitral valve, there is a murmur, followed by a sound; and, unless attention be given, the two are indiscriminately classed as regurgitant. Usually, the thrill felt by the hand, accompanying constriction, fixes the attention; and, the murmur and thrill being synchronous, and the thrill preceding the impulse, the diagnosis is rendered easy. But this method is not always available; and it has been recommended to time the murmur by the radial pulse, which is altogether fallacious, as a considerable interval often separates the systole of the heart and the beat of the pulse at the wrist. The

* Continued from page 496 of last number.