I have pleasure in referring to a very interesting paper from the pen of Mr. Samuel Gale, published in the *Chemical News* for March 17th, 1860, in which are described many excellent preparations of phosphate of lime, soda, etc., in combination with iron, manganese, zinc, etc.; and, although I am not an advocate of all the medicines herein detailed, still there are some which are well worthy the consideration of practitioners. Among these may be mentioned the syrup of the phosphate of iron and lime and the syrup of the phosphate of iron. The former has obtained great renown both in America, where it is largely consumed, and in this country. It is known to the public under the term of "chemical food", as it is stated to contain all the elements necessary to revivify the constitution when harassed by scrofulous diseases. It is used by all chemists, but is obtainable only from America. I can specially recommend the preparation of Messrs. Squire of Oxford Street, and Mr. Fincham of Baker Street; and advise it to be taken in concert with some effervescing draught, as that formed by the combination of equal parts of tartaric acid and bicarbonate of soda, whereby the sweet taste of the syrup, which forms a compulsory portion of the medicine, is much and agreeably disguised. The dose for a child is about one teaspoonful. The improvement gained by the use of a limited course of the syrup is oftentimes most marked, and I could record many instances of strumous affections which have been greatly benefited by it.

Gold, Manganese, etc. Of the former of these minerals I have had no experience, as regards its boasted virtues over tuberculous glands. The latter is much used, especially in Scotland, as a tonic; and, as such, is very useful, in combination with lime and iodine, in the management of tuberculous diseases.

[To be continued.]

CASES OF POISONING BY MONKSHOOD (ACONITUM NAPELLUS.)

By T. OGIER WARD, M.D., Winkfield.

HAVING lately had an opportunity of witnessing the poisonous effects of aconite on four persons in the same family, I think the facts observed are worth recording, particularly as the symptoms differed in each patient, and that one suffered from most decided tetanus, a feature not hitherto recognised, as far as I can find, except in cases of poisoning by strychnia. If I recollect aright, all the medical witnesses for the prosecution in Palmer's case contended that the tetanic symptoms of his victim could only have been caused by some form of strychnia, and therefore the refutation of such an erroneous assumption is a matter of extreme importance in a medico-legal point of view.

A lady, of middle age, had made a gallon of mixed pickles, and her eldest daughter, on tasting it a few days after, did not think it hot enough; and going into the garden, dug up about 1 lb. of what she took to be horseradish, which she cut in pieces, scraped, and added to the pickle-jar. The next evening, she and her mother partook of the pickles at supper, at 9 P.M., and went to bed. About 12 o'clock, both were taken ill; the mother with vomiting and purging; but the daughter first felt numbness at the tip of the tongue, extending to the base, with a sensation that it was swelled; rigors, with great depression, and a feeling of extreme illness. She got out of bed, and went to tell her brother in the next room, who brought her mother to her, who begged her to return to bed; but by this time she was so paralysed that she could not get into bed without assistance. Knowing that her mother was ill, she lay quiet some time, but thinking she was dying, begged to be taken to the window, which was done; and now she found that, with a feeling that her eyes would drop from their sockets, she had lost her sight, and her jaw dropped so much that she was obliged to have it tied up. She was again carried to bed, and a medical man was sent for, who gave the mother a draught with tinct. opii, supposing it a case of English cholera, and soon relieved her, so that she was well by morning, having eaten but little of the pickle, and having probably vomited that little. The daughter, however, remained much in the same state at intervals during the night and following day.

At 12 N. the next day, the second daughter, aged about 18, who has long suffered from anomalous dyspepsia, eating but little, and that little chiefly salads, pickles, and other piquant but innutritious food, made herself a salad of lettuce mixed with the pickle, and afterwards drank about a teacupful

of the vinegar in which the aconite had now been steeped for thirty-six hours. At one o'clock the eldest son came into dinner, and also partook of the pickle; and shortly after remarked to his mother that there was something not right in the pickle, as his mouth "filled with water so." This aroused her suspicions; and going into the garden, she found that the roots of the aconite, growing near some horseradish, had been taken for it. On her return she found the second daughter ill, and gave the alarm, at which the elder was so distressed that she jumped out of bed and ran out of the house to call for assistance. Fortunately, the medical man, with a friend, was coming towards the house, and picked her up in the road, where she had fallen exhausted, and carried her back, and then sent to my house for some zinc sulph. as an emetic. Half an hour afterwards, having heard that the family had taken poison, I went to see if I could be of service, when I found that the emetic had taken good effect. Orders having been given to help the patients in exercise, the son was being walked about. He had a depressed, heavy look, his face being rather livid, and he staggered about as if he were drunk, complaining that his legs felt swelled, and too heavy for him to lift them. The numbness about the jaws continued, with occasional attacks of extreme depression and faintness, during which the face became livid, and the pulse very feeble. I had taken some ammonia and ether with me, and these with brandy were freely given, but without any apparent effect, till he became sick, when he began to rally; and after this, when the depression came on, the stimulants were exhibited less freely, so as not to load the stomach, and by bedtime he had nearly recovered. The second daughter was suffering, and looking like her brother, but much worse. She also became sick, but without the same beneficial result; and the attacks became more frequent and severe, being attended with tympanitis, pain round waist, convulsive movements of the legs, the hands being benumbed, cold, and clenched; the pulse slow and scarcely perceptible, and she seemed about to expire. During one of the several attacks, the pulse became imperceptible at the wrist, and only audible by the ear to the chest; and then, instead of convulsions, she had complete trismus and tetanus; the hands being clenched, the arms fixed, the jaws tightly closed by the rigid masseters, and the head and trunk retracted, till she only touched the couch with her head and heels. From this time the paroxysms retained their new character, but gradually became less violent till about midnight, when she could be left with safety. The elder sister seemed to suffer more from the effects of terror and anxiety than from the poison, and the mother was quite sufficiently recovered to assist in the treatment of her children. The next (the third) day, the eldest daughter had a severe attack of pain in the stomach, for which she was obliged to be treated medically. The younger sister and her brother both suffered from severe pain in the spine, with great debility, and it was several days before they were quite well. None of the four, except the mother, had spontaneous vomiting and purging, and none passed any urine during the severity of the attack. The respiration, if affected at all, was only slightly accelerated. The elder sister never lost her senses; the younger recollected but little of which occurred during the more violent attacks.

REMARKS. It will be observed that the mother, who took but little of the pickle, had only vomiting and diarrhoea, and was quite well the next morning. The elder daughter suffered from numbness of the tongue, rigors, depression, loss of power in her limbs, amblyopia, and gastric irritation; but neither vomiting nor purging. The younger daughter had numbness of the tongue and jaws; tightness round the waist; fits of extreme depression, with clonic convulsions passing into trismus and opisthotonos; and loss of consciousness, followed by severe pain down the spine. The brother had numbness of the tongue, salivation, torpor of limbs, and similar attacks of depression as his sisters, followed by pain in spine. I omitted to mention that the youngest daughter, aged 14, ate some onions out of the pickle for supper, but suffered no inconvenience from them.

The action of aconite is local, as indicated by the numbness of the tongue in three of these cases, but its virulence and duration seem to depend on the form in which it was taken; thus, the elder daughter and the son ate the solid root, and in the one it caused gastric irritation, even on the third day; and the son continued to suffer from pain in the spine as long as his younger sister. She had not eaten much of the solid root, but had drunk a quantity of the vinegar, hence, from the complete absorption of the poison, the extreme violence of her symptoms, and also their quicker subsidence; for, except the

pain in the back, which may be ascribed in part to the opisthotonos, and the consequent stiffness of the muscles, she was convalescent the next day. The mother only suffered from the local irritation of the stomach and bowels, no doubt because she got rid of the poison very speedily by vomiting. Trismus and convulsions are mentioned by Christison as occasional symptoms of poisoning by aconite, but not tetanus; yet the opisthotonos and trismus were as well marked, and came on in paroxysms as distinct, as in traumatic tetanus, or in any of the cases of poisoning by strychnine hitherto published. Hence, I consider this is a very important case in its medico-legal bearing; for if there had been only one patient, and the symptoms had not been traced to the pickle, and if death had recurred, the same doubts would have arisen as in Palmer's case; no strychnia could have been discovered by a *post mortem* examination, though the symptoms indicated it; and most probably the real poison would have escaped detection, from having been all absorbed with the vinegar by the stomach and bowels.

Transactions of Branches.

READING BRANCH.

TRANSACTIONS OF THE READING PATHOLOGICAL SOCIETY: ANNUAL RETROSPECTIVE ADDRESS.

By NATHANIEL CRISP, Esq., Swallowfield.

[Continued from p. 920.]

III.—BRAIN AND NERVOUS SYSTEM.

Trismus Infantum. Mr. HARRISON mentioned the particulars of a case of tetanus infantum. The baby, a third child, began to ail when 5 days old, at which time the cord separated. The child had previously been doing well. Two days passed over, during which premonitory symptoms existed, and then all the phenomena of this most horrible malady (requiring to be seen but once to make an indelible impression on the memory) were fully and severely marked. Mr. Harrison drew such a graphic description of the appearance produced by a tetanic paroxysm that I feel justified in quoting his words. He mentions "the wrinkled forehead; the elevated brow; the closed eye; the dilated nostril; the rigid masseter; the fixed jaw; the closed mouth; the corrugated lips; the bubbling saliva; the retracted head; the shortened neck; the starting cervical muscles; the turgid veins; the arched spine; the raised chest; the troubled breathing; the catching diaphragm; the heaving abdomen; the separated arms; the squared elbow; the bent wrist; the clenched fingers; the incurved thumb; the extended and separated legs; the bent down toes; the livid surface; the whole figure rigid; a pitiful sight." Such is the description; and truly a tetanic patient ought to excite all our pity. Hydrophobia excepted, I know of no disease so melancholy in its aspect. The little sufferer in this case lived for ten days. Nothing abnormal during life or after death was to be detected beyond a suppurating condition of the abdominal portion of the cord. The treatment consisted in nourishment, assafoetida, magnesia, and syrup of poppies.

Mr. Harrison remarked on the rarity of this form of tetanus, as compared with former days, and also drew attention to the fact of tetanus not invariably arising from external injury and concluded his paper by quoting authorities in support of this affection being a blood-disease, expressing his hope that ultimately it would prove one of the most tractable disorders of its class; a hope in which we may all share, but which will not, I fear, be realised, at least in our day.

Pathology and Treatment of Tetanus. These observations lead us to the consideration of the true nature of and treatment for tetanic disorders. Is tetanus a zymotic or blood disease? or does it spring from some special affection of the nervous system? Advocates for both views are to be found. Dr. Richardson and Mr. Spencer Wells are in favour of Mr. Harrison's ideas; the former thinking that the tetanus is in traumatic cases due to the formation in the wound, during the healing process, of a special albuminous product, which being absorbed, acts in the blood as a ferment, and so sets up the usual train of symptoms. This is an ingenious supposition, but as yet quite unproved. Much danger may arise from too strongly upholding such views, and at the same time beneficial results may be anticipated from not too doggedly adhering to the generally received notions of this disease. We must remember that nothing certain is at present known in support of

either theory. Life is at issue in a most urgent and painful manner, and great will be the boon conferred, should any one in or out of our profession discover the real cause of the disease. Then we may hope to be able to treat it more successfully. Arguments in favour of the blood or zymotic origin of tetanus may be adduced from some points of similarity between it and zymotic diseases in general. Out of a large number of cases which I have seen, a few of which have survived, I cannot call to recollection one in which it could be certainly said that a cure had been effected. The remedies used may have alleviated pain, abated spasm, supported strength, and prolonged life, thus enabling the patient to outlive the storm; which is, I think, the most we can say. Is not this the case with zymotic diseases in general? Do we cure any of them (unless we except ague)? Much less fatal in their tendency than tetanus, they run their course, and the patient more frequently recovers. What do we cure in fever? We check diarrhoea should it arise; we calm the excited cerebral functions where delirium exists; we keep up the drooping powers when exhaustion occurs; and so we prevent our patient from dying; but is this a cure? I think not. The same may be said of the exanthemata in general; and so they bear a similarity to tetanus; the poison has exhausted itself; no more pabulum is left for it to feed upon; and the disease passes off. Tetanus is at times, to a certain extent, epidemic; so are zymotic diseases. The earlier a case occurs during the existence of an epidemic, the more severe is it likely to prove. The most virulent forms of tetanus are such as supervene the most rapidly after an injury. A softened portion of spinal cord, or an inflamed nerve, is occasionally found in connexion with tetanus. May we assume this to be an effect, not a cause of the disease, like the ulcerated intestine of fever, the eruption of small-pox, the rash of measles, or the blotchy syphilitic skin? Zymotic diseases are, many of them, not prone to recur in the same individual. Has tetanus any such tendency? I am afraid the cases of recovery are so few and far between, that no data can be formed; still it is a point not devoid of interest and perhaps of practical utility. These are some points which appear to me favourable to the advocates of zymosis. On the other hand, strong proofs may be adduced in support of the nervous origin of this disease. The spinal cord is now and then found softened: in one case which I examined, this was very apparent. Nerves in contact with an injured spot are seen disorganised and inflamed. According to Erichsen, this is nearly always, if not constantly, the case; and he brings forward in support of this many instances gathered from a large experience. The injuries most frequently followed by tetanus, are mostly such as implicate parts freely supplied with nerves; as the thumb, the great-toe, or, we may say, the hand or foot. Curling says, that out of one hundred and twenty-eight cases, sixty-four arose after such injuries; but, at the same time, we must bear in mind how peculiarly exposed to severe injuries are these portions of our frame. Next to such accidents as these, those which involve the cutaneous surface, as burns, are the more frequently followed by this disease.

The removal of an injured finger or toe has been followed by good results. This appeared to be the case in one instance I saw, in which recovery took place after amputating a sloughy finger, or rather the remains of it. Why should a wound when cicatrising be more likely to be associated with tetanus than at another time? unless from a nerve being irritated and involved in the contracting cicatrix. The fact which is undoubted that no relief is afforded in a large number of instances by operative measures is but of little weight. A disordered condition of the nervous system once established is very likely to continue long after the exciting cause has been removed. Nerve-structure is of such delicate organisation, that it is as easy to conceive of changes rapidly and unappreciably established pursuing their course to their termination, as to accredit the blood with such a power. Larrey (I think) conceived the idea, that an injury to the front or back of the body was followed either by opisthotonos or emprosthotonos; if such should be the case, no blood-poisoning would account for this peculiarity. But whether or not this be a fact, why should the spasms in one case mostly involve the dorsal, in another the abdominal, and in another the lateral muscles of the trunk, unless the nerves are especially implicated? If we are to give credence to cases reported, in which tetanic symptoms were developed, and death ensued within a few minutes of the receipt of an injury, we must seek a cause elsewhere than in the blood; more especially if an albuminoid principle is to be produced, act as a ferment, and evolve a poison similar in its effects to strychnia, as Dr. Richardson supposes.