I have pleasure in referring to a very interesting paper from the pen of Mr. Samuel Gale, published in the "Chemical News" for October 28, in which he gives the results of his experiments with preparations of phosphate of lime, soda, etc., in combination with iron, manganese, zinc, etc. In some of these preparations, he found a reaction for the phosphate of iron and the phosphate of iron and soda, very similar to the phenomenon of the vinegar of which the aconite had been steeped for thirty-six hours. At one o'clock the eldest son came into the room, and after talking for some time, he during the conversation, marked to his mother that there was something not right in the pickle, as his mouth "filled with water." This aroused her suspicions; and going into the garden, she found that the roots of the aconite, growing near some horseradish, had been taken in the preparation. On that day he was not much used, 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, which she had been walking about, and immediately sent for the necessary attention. 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 swollen, 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 amnion 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 slowly diminished, the stimulants were continued to regulate 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 by violent 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 severe attacks, the pulse became imperceptible at the wrist, and only audible by the ear to the chest, and without 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 mouth, 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 or purgation, but the eldest son was passed and became more and more emaciated, and used the pickle. The symptoms of the tongue and jaws; tightness round the waist; fits of extreme depression, with clonic convulsions passing into trismus and opisthotons; and loss of consciousness, followed by severe pain down the spine. The brother had numbness of the tongue, salivation, torpor of the mind, 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.

It will be observed that the mother, who took but little of the pickle, had only vomiting and diarrh. and was quite well the next morning. The eldest daughter suffered from numbness of the tongue, rigors, depression, loss of power in her limbs, ambiopias, and gastric irritation; but neither had vomiting or purging. She had severe pains in the back of the tongue and jaws; tightness round the waist; fits of extreme depression, with clonic convulsions passing into trismus and opisthotons; and loss of consciousness, followed by severe pain down the spine. The brother had numbness of the tongue, salivation, torpor of the mind, 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 in the other was confined to some inflammation of the gums and 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 induced by chlorodyne has been an occasional symptom 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 the phenomena would strongly indicate a cause in its medicinal bearing; for if there had been only one patient, and the symptoms had not been traced to the pickle, and if death had occurred, the same doubts would have arisen as in Palmer’s case; no strychnia could have been discovered by a post mortem examination, unless we assume that it; and most probably the real poison would have escaped detection, from having been 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 Cribb, Esq., Swallowfield.

[Continued from p. 920.]

III.-Brain and Nervous System.

Tetanus Infantum. Mr. Harrison mentioned the particulars of a case of tetanus infantum. The baby, a third child, began to be restless, at two days old, at night. 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, to be believed) 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 mastater; 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 hearing abdomen; 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, we have been told, is now 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 suppressing condition of the abdominal portion of the cord. The treatment consisted in nourishment, mustard, 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 on 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 its methodology of a case of tetanus by Mr. Christian 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. Granville condemned the disease, on which Mr. Spencer 3 added no observations. 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, sets 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 or 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 success- fully. Arguments in favour of the blood or zymotic origin of tetanus can be adduced from some parallelism 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. Still, when we look at the fact that tetanus, once running its fatal course, is occasionally cured, and that the patient more frequently recovers. What do we cure in fever? We check diarrhea should it arise; we calm the excited cerebral functions where delirium exists; we keep up the dropping powers when excitement occurs; and so on. Is it not the same with tetanus, I ask. A cure. Tetanus; the poison has exhausted itself; no more pabulum is left for it to feed upon; and the disease passes off. Tetanus is at all events a certain extend of an ulcer, and at last, when the earlier a case occurs during the existence of an epidemic, the more severe it is likely to prove. The most virulent forms of tetanus are such as supervene the most rapidly after an injury; and a case of such a sort of tetanus, where the 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, not many of them, are ascribed to some one 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 favorable to the view that tetanus is a blood disease, but there are other facts, and perhaps even stronger 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 disorganized and inflamed and can be separated at times, etc. I cannot speak of this, but I do not think the observations are very instructive. Cartlage 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, the spinal cord is involved in the disease, as burns, are not so. Then there are still 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 short piece, or rather the remains of it. Why should a wound which cicatrizing be more likely to be associated with tetanus than another time? unless from a nerve being irritated and involved in the contracting cicatrix. The fact which is undoubtedly true is, that in a large number of instances, other 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. Nervous structure is so delicate, the motions of such delicate organization, that it is as easy to conceive of a disordered nervous system, and temporarily, truly, to be the first cause to its termination, as to accredit the blood with such a power. Larray (I think) conceived the idea, that an injury to the front or back of the body was followed either by opisthotonos or emprophotonos; if such should be the case, no blood could be detected. I am in favour of some modification of this, but not this a fact, why should the spasms in one case most commonly 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 the local or remote tissues have been injured within a few minutes of the receipt of an injury, we must see the cause elsewhere than in the blood; more especially if the albuminoid principle is to be produced, act as a ferment, and evolve a poison similar in its effects to strychnia, as Dr. Richardson supposes.