peculiar or exceptional results, but as types of the fourteen experiments recorded in THE LANCET, will be interesting to those who have never seen an account of these results, and who may not now have an opportunity of referring to them.

"Four drachms of slightly alkaline saliva, sp. gr. 1010, were injected into the right external jugular of an old mongrel dog, and at intervals of several minutes the injection of a similar quantity was repeated, until two ounces had been injected." For the purposes of this paper, it is scarcely necessary to refer to the immediate result upon the nervous and circulatory centres by these injections. The effects were most severe, and the phenomena produced were not unlike what might be expected after the exhibition of a poisonous dose of some powerful drug. "After three or four days the dog appeared quite recovered, and it was not until the sixteenth day succeeding the experiment that symptoms of rabies showed themselves, the dog having been ailing the day before. On the day mentioned, the dog growled and snapped at everything, living and lifeless, that approached him. My assistant in alarm ran away, and the other attendants being terrified at the dog's madness, deserted me also, and I was consequently left to manage him alone. By unobservedly seizing him at the back of the neck with one hand, and grasping him tightly, I was enabled to raise his lips with the other, when I observed that his mouth was filled with foam, and that his gums and cheeks were much swollen and inflamed; his nose was very dry and hot; paws cold and tender; respiration interrupted with frequent sighing; pulse 106. So long as I held him in my grasp, he seemed to be quite docile and contented, but the moment I loosed my hold, he ran furiously at me, and but for a strong chain which secured him to the wall, I have no doubt I should have suffered from his bites. In a few hours the froth began to distil from his mouth; he was tortured with thirst, and lapped water eagerly, and without dread; indeed he plunged his mouth and face into the cold liquid, as if to relieve the heat and inflammation which troubled him; with the same intention he licked the cold wall and floor, but he would not touch any warm body, nor would he lap tepid water. He was remarkably irritable and restless, and when not snapping at objects that approached him, was constantly turning about, or chewing the sand and straw that were near. He was seen in the afternoon of this day by Mr. Bowker, surgeon, and by several other scientific friends, all of whom were decidedly of opinion that he was the subject of madness. In the evening his restlessness somewhat abated, and he lay moaning in a husky voice, occasionally altering the position of his head, as if anxious to sleep. Thirst and salivation were diminished; eye dull and glassy; pulse 64; nose dry; extremities cold. He continued in this state, with increasing weakness and somnolency, until about five o'clock on the following morning, when, after a few struggles and signs of suffocation, he died."

In the second typical experiment, "six drachms of neutral saliva, sp. gr. 1008, were introduced at three separate injections into the right common carotid of a dog. Each injection was followed by an extraordinary increase in the heart's action, hurried irregular respiration, and general convulsion. At the end of six hours slight coma supervened, respiration was deep and stertorous, heart's action slow and laboured, sensibility very diminished. As in the preceding experiment, the dog recovered apparently in a few days, but on the morning of the eighth day, on being visited with his breakfast, he flew at the servant, who narrowly escaped him. He frothed considerably at the mouth, and appeared fierce in the eyes, which were deeply reddened. He wandered about incessantly, chewing sand or straw or lapping a little water, but he refused all kinds of solid food. After having gnawed an opening large enough in the door of the place where he was confined, he escaped, and was pursued by half-a-dozen men, who were in trepidation from the manifest signs of madness which the dog exhibited. He snapped furiously at everything that approached him, and would occasionally pursue one of his opponents, until tired by the effort, he was compelled to stop for breath. When I saw him in this state he was staring wildly, and a quantity of frothy saliva was distilling from his mouth. I put a strong glove upon my right hand, and whilst the dog was engaged in snapping at a stick held before him, I caught him by the back of the neck. On the following morning he was much in the same state, but less inclined to bite; his mouth was

still very frothy, and his eyes deeply reddened. The irritability and restlessness increased towards evening; he would allow nothing to approach him without snapping at it; he was constantly engaged in licking the cold wall, or chewing straw, sand, or coal, or dragging himself upon his belly over the rough ground. On the tenth day he was improved, and the signs of madness diminished. He lived some weeks afterwards, and the nose and ear having sloughed away previously, he eventually died from the effect of gangrene of the extremities."

To determine whether the mere animal matter of the saliva had any share in producing the above phenomena, Dr. Wright performed the following experiments:—

"I injected a drachm of isinglass dissolved in two ounces of water into the carotid artery; a little temporary excitement was the consequence, but the animal suffered no further inconvenience. I injected a drachm of pure mucus, diffused through an ounce and a half of water, into the jugular vein; the heart was a little quickened, and respiration was correspondently hurried, but the effects completely subsided in twenty minutes. I injected the entire white of an egg, diffused through two ounces of water, into the left common carotid artery of a dog. It produced considerable cerebral excitement, which was succeeded by drowsiness and feebleness of the limbs that continued for several hours; but the symptoms were very mild, and their duration inconsiderable."

The experiments now recorded, although not actual proof of the action of saliva produced by absorption after dog-bite, at least *prima facie* are strongly suggestive of what would be likely to be the result where the individuals or dogs bitten are the subjects of some idiosyncrasy or peculiarity, and the deductions arrived at in my previous communication advanced no further than is contained in this proposition.

The facts now brought to the notice of the readers of THE LANCET may not have been seen by Mr. Fleming, and if such be the case, they will be as interesting to him as I feel assured they will be to those to whom the etiology of hydrophobia has latterly been a frequent subject of thought and discussion.

Pontefract.

CASE OF AMPUTATION DURING ACUTE MANIA.

By G. B. FERGUSON, M.A., M.B. OXON.,
SURGEON TO THE CHELTENHAM HOSPITAL.

DAVID H—, aged forty-nine, a shoemaker of Tewkesbury, was admitted into the Cheltenham Hospital on the 16th of March, 1874, with the lower half of the right leg badly crushed and the foot torn off, as the result of being run over by a railway train. Amputation at the lowest practicable point, about three inches below the knee, was performed by skin flaps and circular division of muscles. The arteries were twisted; dressings of carbolic oil were used, and the stump supported on a back splint, the whole being covered with cotton-wool; a tent of lint was left for drainage, which last was carefully attended to throughout. The patient was in a state of acute mania at the time of the operation. Occasional symptoms of mental strangeness had been apparent for some little time before, but the acute attack dated from the time of the accident. This was probably occasioned by his having taken too much to drink in Cheltenham on the previous day, and having wandered on to, and fallen asleep on, the Midland Railway.

For fully a fortnight he required watching night and day, talking nonsense, gazing fixedly on all who approached him, pulling off his dressings, struggling and attempting to get out of bed; and all this without any of the terror, manner, or optical illusions of a delirium tremens patient. He took his food well throughout, consuming his pint of beer with satisfaction, but refusing more. His settled delusion was that he had committed various mortal crimes for which he was presently to be tried and hung, his constant request being that the trial should be dispensed with, but that the sentence, hanging or beheading, should be forthwith executed. He was rather uneasy about his spiritual welfare, but seemed

to entertain the idea that his physical punishment would balance his crimes; these were, without doubt, wholly imaginative. For the first night or two the insomnia was marked, large and repeated doses of chloral giving no sleep; nor were morphia or tincture of opium more successful; but Dr. Clouston's prescription, thirty minims of the tincture of Indian hemp with thirty grains of bromide of potassium, which he has found so valuable in asylum practice, was quite efficacious in a single dose. Nay, more; the tendency to sleeplessness persisting, it was used every night for nearly a month with undiminished effect, by the end of which time the man was at any rate in nearly his proper senses. His diet was, of course, liberal, though it included but little stimulant. The stump was nearly healed in a fortnight, hardly any pus having been produced, and, despite a good deal of bruising during the time of his violence, without any action that could be termed inflammatory.

I append a thermometrical table. It will be seen that the highest temperature was not attained before the fifth day—two days later than is usually the case, but being, however, about the time of his most marked insanity. It will also be noticed that the pulse and respiration reached their maxima before the temperature attained its highest point. All these factors were normal by about the eleventh day, although for some time longer the patient was under the influence of his delusions. On the fifth day, when his general aspect was alarming, and his tongue dry and brownish, the sphygmograph gave a favourable prognosis, the pulse sustaining some pressure without obliteration, and diastole being nearly absent in the tracing. He left at the expiration of about two months, with the stump well consolidated, and apparently sane, though eccentric.

	Temp.	Pulse.	Resp.
March 16th, evening	100.6°	84	18
„ 17th, morning	101.2°	84	18
„ „ evening	100.0°	96	24
„ 18th, morning	100.5°	96	24
„ „ evening	102.4°	108	18
„ 19th, morning	100.0°	96	36
„ „ evening	102.0°	120	48
„ 20th, morning	103.2°	96	24
„ „ evening	103.0°	96	24
„ 21st, morning	102.0°	96	24
„ 22nd, morning	99.7°	84	24
„ 23rd, morning	100.4°	84	18
„ „ evening	102.0°	96	24
„ 24th, morning	99.6°	96	—
„ 25th, morning	99.2°	96	—

PERICARDITIS WITH EFFUSION; ASPIRATION OF PERICARDIUM.

IMMEDIATE RELIEF AND ULTIMATE RECOVERY.

By T. H. BARTLEET, F.R.C.S.,
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DR. HARVEY, under whose care the case is, reports that the patient, Henry H—, aged twenty, had been for fourteen days suffering from acute rheumatism, but under his care for four days only. Symptoms of pericarditis were observed on Dr. Harvey's first visit. On Nov. 13th he found the patient suffering from urgent dyspnoea. There was a considerably increased area of cardiac dulness and marked failure of pulse. At noon on Nov. 13th Dr. Russell saw the patient with Dr. Harvey, and reports: Very feeble and rapid pulse; very rapid breathing; much dyspnoea.

Cardiac dulness extended to one inch to the right of the sternum and to the upper border of the first rib above, though here the dulness was not complete. The limit of the dulness on the left side was uncertain, owing to effusion in the chest. On auscultation, the heart-sounds were very feeble and distant; no friction-sound. There was a faint mitral bruit. The character of the heart-sounds was not affected by posture. The impulse of the heart could not be felt, otherwise than as an ill-defined movement of the chest-wall at the region of the apex, spreading over a space the size of a crown-piece. The history of cardiac disorder at a

former period suggested the possibility of pericardial adhesion.

At 8 P.M. on Nov. 13th aspiration was performed. A No. 2 aspirator needle, unguarded, was used. This was passed in the intercostal space between the fourth and fifth ribs, two inches to the left of the central line of the sternum. The needle was used as an exhausted needle; and directly the pericardium was penetrated, as shown by fluid freely passing into the aspirator, the point of the needle was pressed up against the chest-wall as closely as possible. The fluid flowed freely to fourteen ounces, and then stopped flowing. It was deeply tinged with blood, and deposited speedily a scanty coagulum, and subsequently a layer of blood debris. The supernatant fluid, still somewhat tinged, had a specific gravity of 1024.

During the latter part of the operation it was noticed by all present that the needle could be felt when held by the finger to be moved with the contraction of the heart. The patient was breathing deeply from pain or excitement, and thus prevented any cardiographic movements of the needle being seen. During and for half an hour after the operation the patient complained of severe aching pain. This ceased after a dose of fifteen minims of liq. opii. After the operation the line of dulness had receded to close upon the middle line of the sternum. The subclavian dulness had not disappeared, but was much less marked.

Nov. 14th.—Had passed a good night. Dr. Harvey thought the dulness a little increasing.

15th.—Reported considerably better. Lying down with ease; no dyspnoea; marked improvement in his look; pericardial dulness hardly reaches the right edge of the sternum. The first and second intercostal spaces are clear; third rib partly so.

Dec. 3rd.—Dr. Harvey reports that the pericardial dulness has nearly disappeared, and the pleuritic fluid has been mostly absorbed. Now that the heart-sounds can be plainly heard, a loud regurgitant mitral sound is developed.

10th.—Dr. Harvey reports to-day that the patient is able to sit up and walk about in the house.

Remarks.—This case shows the ease and safety with which paracentesis pericardii can be performed, for the relief of urgent symptoms resulting directly or indirectly from pericardial effusion. There was no difficulty in the operation itself, nor was there any subsequent symptom to mar the steady progress of the case to recovery. One point more is of especial interest—namely, that no peculiar or unfavourable importance need be attached to a free admixture of blood with the fluid withdrawn.

Birmingham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

ST. THOMAS'S HOSPITAL.
CASES OF ANEURISM CURED BY DIGITAL COMPRESSION.
(Under the care of Mr. MAC CORMAC.)

AT page 693 we published the notes of a case of popliteal aneurism cured at the above-named hospital in twenty-three hours by means of digital compression. In the first of the subjoined cases pulsation was completely arrested in seventeen hours; but in the second case, which was traumatic, digital compression, although ultimately successful, was not so satisfactory as in the other cases. The mode of treatment adopted in the latter case may be contrasted with that which was employed in some cases of traumatic aneurism the notes of which we reported last week from Guy's Hospital. Two of these were instances of traumatic aneurism of the radial artery, and both were treated by opening the sac and tying both ends of the vessel. In one case the patient left the hospital cured in fourteen days, and in the