

not seen elsewhere very often, is that advanced students are allowed to perform operations under the guidance of the professor or his assistant. A considerable lipoma of the vulva was thus operated on during my visit.

At the Eye Hospital, where Professor Becker has his *clinique*, the out-patients are numerous. The wards are small, and the passages narrow, as might be expected in an old house which has been converted for the nonce into an eye infirmary. All the patients pay for their attendance—the first class four florins, the second three florins, and the third half a florin per diem. A new eye hospital, however, is likely to be built shortly. There is one ward for children with six beds. Graefe's operation is the one usually performed for cataract, one eye being undertaken at a time, and the organ covered with soft cotton-wool, secured with a flannel bandage. English students of philosophy are often seen in the classes of Kirchhoff and Bunsen, the renowned professors of Physics and Chemistry, but rarely in the medical department. It is interesting to find that among the text-books in chemistry that are most used, are those of Graham and Roscoe, and that a good knowledge of the English language seems an essential part of the qualifications of the professors of this University.

## Correspondence.

"Audi alteram partem."

### ETHER v. CHLOROFORM.

To the Editor of THE LANCET.

SIR,—I read with great interest and pleasure the recent protest of my friend and colleague, Mr. Pollock, against the habitual employment of chloroform as an anæsthetic, and I beg leave to express my hearty and entire concurrence with his observations.

At the International Congress of Ophthalmologists, held in London in 1872, Dr. Joy Jeffries, of Boston, U.S.A., read a paper in which he strongly advocated the use of ether, and he did so on the twofold ground that chloroform is dangerous to life, while ether is *absolutely safe*, and that there should be no deaths in ophthalmic surgery. In the debate which followed I said that, unless my memory deceived me, there had been deaths from ether, and that ether did not produce sufficient muscular relaxation for operations upon the eye. Dr. Jeffries rejoined that the supposed deaths from ether had been fully investigated in America, and had all been traced to other causes; that it would be impossible to destroy human life by ether vapour except negatively, by depriving the patient of air; that any practitioner in America who had a fatal case of chloroform administration would almost certainly be convicted of manslaughter; and that imperfect muscular relaxation depended upon an imperfect method of administration. Upon this I invited him to come and administer ether at St. George's, and when he did so I operated upon several patients to my entire satisfaction; in one case extracting senile cataract from both eyes, without the smallest degree of reflex muscular contraction being produced. Since that time I have almost discarded chloroform and bichloride of methylene, both in hospital and in private practice, and, for adults, use ether as my sole anæsthetic. The ophthalmic operations at St. George's are probably equal in number to all the others put together; and an experience of two years and a half has neither given us a single case of imperfect action nor produced a single unfavourable or alarming symptom. The secret of administration is to give ether enough, and to exclude external air until insensibility is produced. We sometimes use chloroform for young children, who generally take it kindly, and we sometimes give a few whiffs of chloroform to render irritable air-passages insensitive to ether, but that is all. The contrast between the effects of the two agents is very striking. An old patient, brought deeply under chloroform, generally becomes very pallid and bathed in sweat; but the same patient under ether would have a flushed face, and would be sustained and stimulated instead of being depressed.

Shortly before the reading of the paper to which I have referred, it was my misfortune to administer chloroform to a robust, healthy girl of seventeen, who died under its influence during an operation for strabismus. Within a week of her death two others took place in London under similar circumstances, one in the ophthalmic department of a general hospital, and one in the private house of an ophthalmic surgeon. I feel very strongly that these events ought not to recur. Chloroform and bichloride of methylene have no advantage over ether, except that they act a little more quickly; and the gain of a few seconds affords no justification for the sacrifice of human life. It seems to me that surgeons who persist in the administration of the possibly deadly agents incur responsibilities which should not be lightly undertaken in the face of better knowledge. At a coroner's inquest the question, "Would not this result have been avoided by the use of ether?" would not only be difficult to answer at the time, but it might lead to subsequent complications of a painful character.

I am, Sir, your obedient servant,

Wimpole-street, January 6th.

R. BRUDENELL CARTER.

To the Editor of THE LANCET.

SIR,—I am glad to see, in the LANCET of this week, a letter from Mr. Pollock, drawing attention to the fact that fatal cases still continue to occur from the inhalation of chloroform, while we have available in ether an anæsthetic of so much greater safety. As, moreover, ether has, besides its greater safety, other advantages over chloroform, I cannot but think that a persistence in the use of the latter must be due to an ignorance of the ease and safety with which the former can be administered.

Since the publication of my paper on the relative advantages of ether and chloroform as anæsthetics, read at the Royal Medical and Chirurgical Society in 1871, ether has been largely used both in England and Ireland; and there must be many besides myself competent to express an opinion upon its merits. For my own part, however, I can quite certainly say, that a greatly extended experience of its use completely confirms the favourable opinion I then expressed of it.

An examination of the fatal cases of chloroform inhalation shows the mode of death to have been almost invariably by failure of the heart's action, and this failure is generally sudden.

Now, the committee appointed by the Royal Medical and Chirurgical Society to investigate the effects of chloroform found that "the simple failure of respiration, whilst the circulation remains good, almost always betokens a recoverable condition;" but that "the failure of the circulation to any considerable extent always involves extreme peril;" and "after the heart has stopped, recovery is but just possible, and is by no means the usual result of attempts to resuscitate." So that the danger from chloroform is precisely of that kind which it is most difficult to guard against, and which is most hopeless when it occurs. On the other hand, the same committee state that ether vapour stimulates the heart's action, and that the pressure in the vessels is maintained until there has been a manifest failure of the breathing. And Dr. Snow proved that it was impossible to paralyse the heart by ether inhalation. It is this stimulating property which gives to ether its greater safety, and enables us to use it not only as an anæsthetic, but as an antagonist to the shock of an operation. Under the influence of ether, as I have often pointed out, the patient may have a better pulse after than before even a severe operation. Besides this, he is saved the distressing depression which so often follows the inhalation of chloroform; and persons who have inhaled both ether and chloroform have several times expressed to me the great difference they have experienced in this respect from the two drugs.

This, and the absence of after-sickness (another of the advantages of ether), have been, and especially, noticeable in several cases of ovariotomy for which I have administered ether.

It is needless to point out how great an advantage it is to those who, without any special experience, are called upon to give an anæsthetic, to be able to use one so free from danger as is ether. Indeed, in an emergency, a patient, after being rendered insensible by ether, may be safely kept under its influence by an unskilled assistant.

Moreover, when a person has been fully narcotized by ether, its anæsthetic effects last much longer than chloroform, so that a considerable operation, such as removal of the upper jaw-bone,

may be performed without the necessity for renewing the inhalation.

The disadvantages of ether are, the pungency of its vapour, the somewhat noisy excitement which sometimes occurs during recovery from its effects, and the amount of salivary secretion which it excites. This last is a very decided inconvenience in plastic operations within the mouth, but the other two objections are trifling when compared with the comfort of feeling that you are dealing with a safe anæsthetic. In fact, its relative safety should surely be that which should chiefly influence us in the choice of any anæsthetic.

I do not doubt, Sir, that it is possible to kill a person with ether, and, as I have elsewhere said, it is a mistake to claim for any anæsthetic absolute safety. We can scarcely expect to render a person profoundly insensible without incurring some danger; but it is of great advantage to use an agent the danger from which usually occurs only with sufficient warning to enable us to avert it. This is the case with ether; and I think Mr. Pollock has done both the profession and the public a service in pointing out the responsibility of those who persist in using the more dangerous anæsthetics.

I am, Sir, your obedient servant,

J. WARRINGTON HAWARD.

Montagu-street, Portman-square,  
Dec. 28, 1874.

## THE SURVIVORS OF THE "COSPATRICK."

To the Editor of THE LANCET.

SIR,—An account of the horrible sufferings endured by the occupants of one of the two boats of the ill-fated emigrant ship *Cospatrick* will, by this time, have become familiar to the British public.

The three survivors, sailors, came under my care after eight days' humane and judicious treatment by Captain Jahnke, of the ship *British Sceptre*. One, aged thirty, was suffering from muco-enteritis; another, aged forty-six, from debility; and the third, aged eighteen, from inflammation of the feet—a common result of prolonged and uninterrupted soaking in sea-water. From these men I have elicited the following account.

The boat in which they took refuge from the burning ship contained thirty persons, all males, and, with three exceptions, adults. From 1 A.M. of November 18th to 5 P.M. of Nov. 27th, the date of their rescue, they were without a drop of water or a morsel of food. Their clothes were constantly wet with sea-water until the 25th (eighth day), when the weather calmed, and their clothes dried. Although thirst had been severe, it did not become agonising till the eighth day, when hunger, too, became almost insupportable. The three statements on these points, as on others, are in perfect accordance. In the fatal cases death was preceded by "madness," a result attributed to drinking sea-water, a temptation which the survivors resisted until the ninth day, when they drank a small quantity only. In one or two cases indications of "madness" were apparent before sea-water was drunk. The first death occurred on the fifth day, when six persons died; on the sixth day four died; on the seventh day six died; on the eighth day the number was reduced to eight, and three were mad. All complained of a distressing sense of emptiness in the abdomen, attended in a few cases with pain in the left side. The mental faculties were torpid, and the bodily languor extreme. Each was early aware of the offensive smell of his own breath, and was tortured by a clamminess of mouth, which was relieved somewhat by mumbling a button. After the first deaths almost complete silence reigned in the boat, broken occasionally by delirious mutterings. Notwithstanding their prostration, none could control a restlessness which impelled them to shift frequently from place to place in the boat. In the fatal cases the sufferers were delirious for a day or more, but not violent; they wandered aimlessly about the boat, and would, at length, lie down and die calmly, apparently in sleep, probably in a comatose state. From the second day to the time of rescue each man drank his urine, which fluid was, without known exception, voided freely, and was clear and of a full sherry colour. On the sixth day of their torture the survivors, in common with many who afterwards died, drank the blood of the dead; each also essayed to eat a

small quantity of liver, and with much difficulty swallowed it. They continued to drink blood, in larger or smaller quantities, until their deliverance. In one case only did diarrhœa occur; in the others no evacuation from the bowels took place during privation. The first evacuation after return to food was "black like blood" and horribly offensive. Cold was not a cause of much complaint, although, at night, the poor creatures huddled together for warmth. One of the survivors, aged thirty, who weighed 172 lb. on the day of the fire, lost 27 lb. during the terrible ten days. The men are now convalescent, and gaining flesh rapidly.

Yours truly,

CHARLES H. FOWLER, M.D.,  
Civil Hospital, St. Helena.

Dec. 12th, 1874.

## Obituary.

FRANCIS KIERNAN, F.R.S.

To English anatomists of the present century belongs the great honour of having unravelled the two great emunctory organs of the body which had hitherto defied generations of anatomists. Kiernan and Bowman are names which have been known throughout the physiological world, and it says not a little for their acumen that, though later observers may have added somewhat to their researches, yet their original observations have stood the test of time, and their diagrams are those reproduced in even the newest anatomical works. Kiernan was a pure anatomist, and did nothing to distinguish himself in surgery; Bowman, on the contrary, has achieved a reputation as the leading English ophthalmologist.

Francis Kiernan was born in 1800, and was educated at St. Bartholomew's Hospital, where his devotion to anatomy led to his becoming soon known as a "coach," whose private demonstrations proved more attractive than the heavy lectures of the recognised teachers of the great hospital. This was not to be tolerated, however, and the magnates of St. Bartholomew's Hospital, who have always been in preponderance at Lincoln's-inn-fields, soon passed one of their delightful bye-laws refusing "recognition" to Mr. Kiernan's teaching. We recommend anyone who wishes to study petty tyranny in its meanest form to investigate the proceedings of the Council of the College of Surgeons in this matter as portrayed in the columns of THE LANCET for 1824—26.

One fortunate result of this enforced retirement was that Mr. Kiernan was able to devote the whole of his energies to his investigations on the structure of the liver, which gained him the Fellowship of the Royal Society with the Copley medal and a European reputation. It might have been supposed that, with such a reputation, some one of the London schools would gladly have secured Mr. Kiernan's services, and when King's College was founded negotiations were set on foot which led to Mr. Kiernan's presenting to the then embryo museum of that institution a number of his valuable injections of the liver, but did not lead to his receiving any appointment. Religious scruples, curiously enough, came in the way of the King's College authorities when the question of appointment was mooted, and, as Mr. Kiernan declined to change over from the Romish to the English Church in order to secure the chair, he was left out in the cold; but the preparations are still at King's College!

It was only when the University of London received its charter in 1837 that Kiernan's merits were properly recognised. He was appointed a member of the Senate, and became, in conjunction with Dr. Sharpey, one of the examiners in Anatomy and Physiology. This office he held for many years, and did much, by the high standard of his questions, to raise the character of the medical degrees of the University.

Mr. Kiernan was one of the first batch of Fellows of the College of Surgeons created by the charter of 1843, and in 1850 he was elected into the Council with the late Mr. Mackmurdo. He was re-elected in 1860, and in 1862 became an examiner under somewhat peculiar circumstances. With undeniable claims to recognition as an anatomist, Mr. Kiernan had never been a hospital surgeon, and it was felt,