distinct croupy inspiration. In this animal, the blood was found firmly coagulated in the cavities of the heart; and in the upper and the lower segments of the trachea there was distinct fibrinous exudation.

From these experiments, it seemed to me conclusive that oxygen administered in the manner I have described was generally destructive of animal life by increasing waste and causing separation of fibrine in the blood. The inference was not just, as the following experiments will show.

On July 9th, a rabbit was placed in the same chamber in which a number of the experiments, described above, had been performed. The oxygen was made in the same way, and transferred in the same way. At first the animal seemed excited, and often thirsty; but it also ate voraciously of green food. During nine days it was kept in the stream of gas; and no material change followed. It was now removed from the oxygen. It weighed four ounces less than before the commencement of the experiment; but otherwise it was unaltered.

After the lapse of a week the rabbit was replaced in the chamber, and the administration of the gas recommenced. This time the exhibition was kept up for twenty-one days, without any indication of dying or even of suffering on the part of the subject. Once more the animal was placed in the common air, and it lived many months. It continued always thinner than it was before being submitted to the action of the gas; but that was all.

One or two special changes which occurred during the inhalation of oxygen, should not escape notice. There was often a brilliant vermilion tint of the ears; and when the creature wanted food, the breathing was more hurried, varying from fifty to even one hundred respirations a minute. On two or three occasions it became oppressed, and the alæ of the nose worked rapidly. Then the current of gas was supplied a little more swiftly, and at once the animal became as alert as before.

I witnessed in this experiment the results obtained by Lavoisier, and by that section of observers who have considered that the inhalation of oxygen is not attended with danger, even though sustained for long periods of time. What was more, whenever I repeated these experiments on the same kind of animals, I obtained the same results to the letter. Dogs, cats, pigeons, and Guinea-pigs died; but rabbits lived on. The fact, so often repeated, led me to think that the differences arose from the animal employed. To settle this point, I made the following experiments.

I constructed a chamber of a cubic capacity of two feet. I made a perforated false bottom as before, and put beneath this potash for taking up carbonic acid. I arranged so that I could change the potash at pleasure. The chamber was then divided into stalls by perforated zinc; and a neat and effective plan was made for introducing food into each division. Eighty gallons of oxygen gas were then made in two reservoirs; and the chamber was tubed for a current as in the one already described.

There were now placed in the chamber in the different stalls, a dog, a kitten, a rabbit, a pigeon, and three frogs; and the oxygen-current was turned on. The pigeon began to suffer from rapid breathing in two hours, and its legs, previously pale, became vermilion red. The dog suffered more; the kitten less. At the end of twelve hours, the dog was nearly dead; the pigeon was drooping; and the kitten was suffering considerable excitement. The rabbit was as well as ever. The frogs were also uninfluenced. On removing the animals, the dog died almost immediately. The other animals slowly recovered.

On a succeeding day I repeated this experiment on

other animals of the same kind, continuing it for thirteen hours. The result was the death of the pigeon and of the kitten; great prostration of the dog, which, however, recovered on removal into the air; and entire escape of the rabbits and the frogs. The temperature in all these experiments was from 60° to 65° Fahr.

We gather from these experiments the fact, that in carnivorous animals and in birds ozonized oxygen, at ordinary temperatures, produces what would be called pathologically a general inflammatory condition, with death from separation of fibrine, as is common in inflammatory diseases. We see also that in one experiment local inflammatory mischief was induced in the trachea. In rabbits, the circulation is quickened by the same process, and waste of tissue results, but the animals are enabled to live. In a succeeding chapter, I shall show the effects on similar animals of common air charged with ozone.

TINCTURE OF DIGITALIS IN DELIRIUM TREMENS.

By JAMES POLLARD, Esq., Torquay.

J. M., aged 46, a strong muscular man, much addicted to drinking, was kicked by a horse in the leg, which became inflamed, and confined him to his bed. On being sent for on Friday evening, January 6th, I found him very restless, tossing about in bed, fancying that dogs were biting him, and other delusions. His wife informed me that he had not slept for the last two nights, and that she had had great difficulty in keeping him in bed. I at once gave him a strong glass of brandy and water, with half a grain of muriate of morphia.

Jan. 7th. He passed a troublesome night without any sleep. I prescribed for him two cathartic pills to be taken immediately; a saline mixture during the day; and in the evening, half a grain of morphia and half a drachm of tartar emetic wine every two hours, which was given regularly until 10 P.M. on the 8th without any good results.

About 2 A.M. the following morning, I was requested to see him immediately, as it took three men to keep him in bed; and on my arrival I found this to be the case. I then gave him four drachms of tincture of digitalis. He very soon afterwards became tranquil and slept for an hour.

At 4 A.M., three drachms more of the tincture were given (about half an hour afterwards he became very sick), which kept him quiet until 10 A.M., when, as he became again disturbed, the draught was repeated containing four drachms of the tincture. He did not sleep, though he was quiet till evening, when I again saw him, and found him as bad as ever. Four drachms more of the tincture were given, with the best results, as he slept the whole of the night and the greater part of the next day; and from that time he rapidly progressed.

I believe that, if I had given him the fourth dose at a shorter interval, a more satisfactory result would have been earlier produced.

THE IRISH MEDICAL MAN, says Dr. Mackesy, "is exposed to great risk from contagion. He has to combat fever in all situations and at all seasons. It is a startling fact that the mortality—the proportionate deaths of the medical officers of Irish charitable institutions, exceeded by more than one-half the proportionate deaths of the officers of the British army during the Peninsular war."

LEEDS GENERAL INFIRMARY.

STATISTICAL TABLES OF THE OPERATIONS PERFORMED FROM JANUARY TO JUNE, 1864, INCLUSIVE.

[Continued from page 116.]

Strangulated Hernia.

No.	Sex and age.	Operator.	Nature of operation.	Stay in Hospital after operation.	Result.	Remarks.
1	M. 15	Mr. S. Hey	Herniotomy.	3 days	Death from strangulation. Reduction <i>en masse</i> .(?) Sac opened.	This was a congenital right scrotal hernia as large as a hen's egg. Strangulation commenced eleven hours before the operation. The sac was opened, and found to contain bowel. A constricting band at the neck was divided, and without the exercise of much force the bowel was returned. Symptoms of strangulation continued until his death. At the <i>post mortem</i> examination it was found that the bowel had escaped through a rupture in the sac anterior to the strictured neck, and was lying between the peritoneum and the abdominal muscles.
2	M. 45	Mr. S. Hey	Herniotomy.	44 days	Recovery. Sac opened.	A left inguinal hernia, the size of an egg, strangulated five hours. In 1859, the same hernia had been reduced by operation; and in 1863, by taxis in warm bath. The sac was opened, and contained bowel only; very severe peritonitis followed; and subsequently a large abscess formed in the sac. For some time his life was in great jeopardy, but he ultimately made a good recovery.
3	F. 59	Mr. Wheelhouse	Herniotomy.	47 days	Recovery. Sac opened.	This patient had had a right femoral reducible hernia, of the size of a large walnut, for twelve years, and had never worn a truss. Strangulation had existed three days, and did not yield to taxis under chloroform. The sac was opened, and besides fluid, contained a knuckle of slightly inflamed intestine. The bowels were moved for the first time on the thirteenth day after the operation by a small enema. She recovered without a bad symptom.

Removal of Ovarian Tumours.

No.	Sex and age.	Operator.	Nature of operation.	Stay in Hospital after operation.	Result.	Remarks.
1	F. 30	Mr. Nunneley	Ovariectomy.	21½ hrs.	Operation abandoned. Death.	The patient had had six children; the youngest was eleven weeks old. During her last pregnancy—before which her health had been in all respects good—she noticed that her body increased much more rapidly than usual, and during the whole period she suffered excruciating pains in the abdomen and back. After her confinement, the body remained very greatly distended. She was, on admission, thin, pale, sallow, and apparently worn down by great suffering. Eight days before the operation, a trocar was thrust into the tumour, but no fluid escaped. An incision, seven inches long, was made down to the sac, and universal adhesions to the abdominal wall separated by the introduced hand; the sac was now tapped, but in consequence of the thick flaky contents blocking up the cannula, very little fluid escaped; a free incision was then made into the sac, and its contents turned out by the hand; several smaller cysts were emptied into the larger one. On further examination, the adhesions were found to be universal, involving liver and bowels to such an extent as to render separation of the cyst impracticable. The operation was therefore abandoned; the opening in the cyst was closed by continuous suture, and that in the abdominal wall in the usual way. At the <i>post mortem</i> examination, the universality of the adhesions was proved, and the impossibility of removing the cyst placed beyond all question.

Cure of Stricture, etc., by Perineal Section.

No.	Sex and age.	Operator.	Nature of operation.	Stay in Hospital after operation.	Result.	Remarks.
1	M. 48	Mr. S. Hey	Perineal section.	34 days	Recovery.	There was extravasation of urine into perineum, scrotum, and penis, with retention, caused by a gonorrhoeal stricture of thirty years' standing. Deep incisions were made into the infiltrated tissues, and one in the median raphe of the perineum, laying open the urethra. When all had become quiet, the stricture was treated by dilatation with bougies; and at the time of his discharge, all the wounds had closed, and a full-sized instrument could be readily passed.
2	M. 33	Mr. Nunneley	Perineal section.	2 days	Death from pelvic infiltration.	In this case there were an impassable stricture, four perineal fistule, through which a considerable proportion of urine passed, and a large abscess distending the perineum. The stricture had resulted from two attacks of gonorrhoea, which he had acquired twelve and ten years ago respectively. In the operation, a grooved staff was made use of as a director.
3	M. 31	Mr. S. Hey	Perineal incision.	42 days	Recovery.	On the day before his admission, he fell astride the edge of a plank. There were complete retention of urine, with distended bladder, and infiltration of urine into the perineum, scrotum, penis, and groins. A deep incision was made in the raphe of the perineum, laying open the urethra, and at once giving free exit to the retained urine; others were made in the scrotum and penis. No sloughing of the parts followed. Seventeen days afterwards, a No. 9 catheter was introduced, and fastened in the bladder, where it was allowed to remain during eighteen days; after which, all the urine was passed <i>per urethram</i> —the perineal and other wounds having quite closed.

Operations for Stone.

No.	Sex and age.	Operator.	Nature of operation.	Stay in Hospital after operation.	Result.	Remarks.
1	M. 31	Mr. Teale	Lateral lithectasy.*	20 days	Death from exhaustion.	He was subject to attacks of acute mania, one of which came on just prior to the operation; and, persisting afterwards, caused his death by exhaustion. The stone was composed of oxalate of lime, and weighed 14½ drachms. No bad symptom occurred consequent upon the operation, nor was any lesion found on <i>post mortem</i> examination.
2	M. 4	Mr. P. Teale	Lateral lithectasy.	22 days	Recovery.	The calculus, coated with lithates, weighed two scruples. Urine ceased to flow by the wound on the thirteenth day. He recovered without an untoward symptom.
3	M. 40	Mr. Wheelhouse	Lateral lithectasy.	74 days	Recovery.	The calculus—a round mulberry, covered with very large projecting cones, weighing an ounce and a half—was extracted with considerable difficulty, owing to its peculiar formation, and to the fact that it was lodged above the pubes. Attacks of severe peritonitis several times endangered his life, and very much retarded his recovery. Some of the urine was passed by the wound up to a fortnight before his discharge from the hospital. He has since quite recovered.
4	M. 58	Mr. Wheelhouse	Lithotrixy.	41 days	Recovery.	The stone was crushed on five occasions, an interval of about a week being allowed between the operations. On examining the fragments, composed of phosphates, of which a very small proportion (3ij) only could be collected, several were observed to contain vegetable fibre, which, on microscopic examination, was found to be hay. The patient acknowledged that, thirty years before, he had passed a stem of hay (flower foremost) down the urethra, and that his symptoms dated from that time.
5	M. 7	Mr. Nunneley	Lateral lithotomy.	48 days	Recovery.	An oval mulberry calculus, weighing nearly three drachms, was readily extracted through a free opening. The urine ceased to flow by the wound on the sixteenth day. No bad symptom arose throughout.
6	M. 46	Mr. Nunneley	Lateral lithotomy.	57 days	Recovery.	The calculus was flat and circular, weighed four drachms, was composed of lithic acid, and, being lodged above the pubes, was with some difficulty extracted by means of curved forceps. The patient was stout, very nervous and dejected, and had a deep perinæum. From the time of the operation, some of the urine passed <i>per urethram</i> , and on the fifteenth day ceased to flow by the wound. He recovered without a bad symptom; but on his discharge from the hospital, the wound had not quite closed.

* In "lateral lithectasy", the usual lateral incision is made, and the operation is completed by dilatation after Allarton's method.

Operations for the Reduction of Dislocated Hip.

No.	Sex and age.	Operator.	Nature of operation.	Stay in Hospital after operation.	Result.	Remarks.
1	M. 31	Mr. S. Hey	Reduction by manipulation under chloroform.	27 days	Recovery, with perfect limb.	The left femur was dislocated upon the dorsum ilii by a fall from a height of thirty feet. Having put him under chloroform, the leg was completely flexed upon the thigh, and the thigh upon the body, so as to form with it an acute angle; the whole limb was then forcibly rotated outwards, and on drawing the leg down, in order to ascertain its position, the head was felt, and heard to slip into the acetabulum.
2	M. 71	Mr. Nunneley	Reduction by manipulation under chloroform.	16 days	Perfect recovery.	This old man was knocked down and run over by a horse, whereby he sustained a dislocation of the right femur upon the dorsum. The signs were well marked. The limb was put through the usual movements; and, when drawn down, was found to be in its natural position, although no sound nor feeling of reduction had been manifested.
3	M. 20	Mr. S. Hey	Reduction by manipulation under chloroform.	13 days	Perfect recovery.	Dislocation of the right femur upon the dorsum alone was found to have resulted from a large fall of earth, which for a time completely buried him. The limb was reduced by one series of movements only, which occupied but a few seconds.
4	M. 30	Mr. P. Teale	Reduction by manipulation under chloroform.	19 days	Perfect recovery.	This patient had also been buried as high as the waist by a fall of earth, and thereby sustained a dislocation of the head of the femur into the left sciatic notch. A little difficulty was experienced in the reduction, in consequence, as was afterwards proved, of the rotation outwards having been made whilst the thigh was flexed at too acute an angle with the body.
5	M. 13	Mr. P. Teale	Reduction by manipulation under chloroform.	42 days	Good recovery.	Whilst working in a coal-pit, he was knocked down, and pushed for a distance of several yards before the wheels of a laden wagon. Dislocation of the right femur upon the dorsum, and fracture of the shaft of the left femur, resulted. One series of manipulations sufficed for the reduction.

In July, a sixth case, in a child two years and a half old, was reduced also by manipulation under chloroform, with a perfect result.

[To be continued.]