the vessels in the stump separately. Haemorrhage has proved a formidable danger in many instances, whether intra- or extra-peritoneal. The chief objections to the extra-peritoneal method are the greater liability to septic absorption, haemorrhage, the too early separation of the clamp, and the much greater delay in the healing of the wound and subsequent convalescence. This latter objection, though not so important as the former ones, is yet a factor in the consideration.

As regards the causes of death, putting aside such unforeseen accidents as tetanus, haemorrhage, too early separation of clamp, etc., I think nearly all the deaths will be found to be due to septicæmia in one of its many manifestations. The symptoms which are most prominent in individual cases vary exceedingly. In one patient, as Dr. Keith recently remarked, death seemed to commence immediately from the operation, and to go on uninterruptedly. I call to mind two cases as illustrating the inequality or irregularity of the symptoms.

CASE I.—Mrs. D. lived five days. The pulse and temperature were normal till a few hours before death. She had incessant vomiting and suspension of flatus from the time of operation. She was sure, almost to the last, that she was going on well "but for the sickness."

CASE II.—Miss H. had no vomiting, and flatus passed freely; but distension came on in forty-eight hours, with raised temperature and rapid pulse.

I think we shall, ere long, forego using the term "surgical fever," and apply to the condition long known under that head the name of septic fever, or some such word, having a precise pathological meaning. That there need be no pyrexia or fever after a surgical operation is often seen by all; I had an illustration of it last week. I removed a large myoma by hysterectomy, including the uterus, ovaries, and tubes. The patient has not had a symptom to cause the slightest anxiety, and her pulse and temperature have not once touched 100. Here was a case of sufficient magnitude to have caused considerable "surgical" fever; but as there was no septicæmia throughout, so there was no fever.

A CASE OF GASTRO-ENTEROSTOMY FOR CANCEROUS OBSTRUCTION OF THE PYLORUS.

By THOMAS H. MORSE, F.R.C.S. Eng.,

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THE following is an account of a case of the above nature which has fallen to my lot to operate upon. I desire to publish it, as I believe it to be the first case of the kind which has occurred in this country. In the BRITISH MEDICAL JOURNAL for February 13th, I have been much interested in reading the account of Mr. A. E. Barker's operation, which was performed at University College Hospital on January 5th, 1886. My own operation was performed on January 4th, 1886, and was very similar in many respects, though I regret to say it was not attended by the same brilliant result, but, on the contrary, by a fatal termination.

The patient was under the care of Dr. Doyle, of this city, owing to whose kindness I had the opportunity of seeing the case, and recording the facts as follows. Mrs. W., aged 65, had for the past six months suffered from vomiting after meals; at first, only after a hearty meal; during the last fortnight, the interval between each attack had been only from one to two hours. No blood had ever been mixed with the vomit. She had been an extremely strong and healthy woman, and had kept up and about her house as usual till December 22nd, 1885. Up to this time, she lost flesh slightly; but from then up to the date of operation, this loss of flesh was much more marked. The bowels acted regularly up to December 25th, but, after this date, there was no further passage of motion from them.

On January 2nd, 1886, her condition was as follows. She was in bed, though quite able to sit up and move herself about; was somewhat emaciated, but still retained her usual robust look in the face; the tongue was slightly coated with white fur. The pulse, which was always remarkably slow, was only 35 per minute, though a very good and fairly strong one. The abdomen was flaccid and empty; in the middle line, just above the umbilicus, was a hard tumour, of the size of an orange, painless to touch, and freely movable; its situation could be distinctly diagnosed when the stomach was full, for this organ could be seen contracting and relaxing alternately; its peristaltic movements could be followed up to the tumour, and could then be

seen to stop abruptly at its left border. The distended stomach and tumour could be moved together, and the peristalsis again watched in the altered position. On percussion, it became apparent that the whole stomach was dilated to about double its natural size; when the organ was empty, the tumour fell downwards, and lay on a level with and nearly touched, the anterior superior spine of the left ilium.

On January 4th, 1886, ether was given by Mr. Donald Day; Dr. Doyle assisted me. It was decided, contrary to my usual rule, not to use the steam carbolic spray, in consequence of her feeble condition, as I considered the prolonged exposure of any portion of the bowel to its influence would not be advisable.

An incision was made very obliquely from above downwards, and from left to right, about an inch above the umbilicus, between four and five inches long. The tumour was then seen to be involving the pyloric end of the stomach, limited abruptly by the origin of the duodenum; it was about the size of an orange, measuring horizontally two inches, and vertically two and a half inches. The peritoneum was smooth on the surface of the tumour, not infiltrated, and nowhere adherent to other structures; the lesser omentum was full of little nodules, of the size of No. 7 shot; the great omentum, all along the great curvature of the stomach, was also studded with small nodules of the same size.

Under these circumstances, I felt that the removal of the tumour would not extirpate the disease. I therefore commenced at once to establish a communication between the stomach and jejunum. I first had to decide as to the best method of approximating these two portions of intestine. This can be done by pushing the great omentum to one side, and drawing the jejunum forward to the stomach; in this way, the jejunum is made to encircle the transverse colon. The other way, and the one which I adopted, was as follows. I first separated, between twoligatures, the great omentum from the great curvature of the stomach, opposite the centre of the organ, for a distance of between two and three inches; the duodenum could then be seen crossing the spine, and ending in the jejunum; the third inch of the latter was taken up, and dragged forwards to the stomach through this opening in the great omentum. Dr. Doyle held it against the stomach whilst I attached it, before opening either viscus, just in front of the line of separation of the great omentum. This I did with fine silk, for a distance of an inch and a quarter, with seven sutures, which included only the serous and muscular coats.

A small incision was then made into the stomach, a third of an inch anterior to the line of sutures, large enough to admit a No. 14 India-rubber catheter, through which the contents of the stomach (which amounted to a pint and a half) were drawn off, and were thus prevented from entering the peritoneal cavity. The incision in the stomach was then enlarged to an inch in length, and a similar one made in the jejunum; this latter bowel was completely empty. The suturing of these posterior cut edges was then completed, according to Czerny's method, as described in Billroth's *Clinical Surgery*—that is, this second row of sutures included only the serous and muscular coats, and emerged on the cut edges of the two viscera; when these were tightened, the cut edges of the two mucous membranes easily came into apposition; indeed, the mucous membrane caused some little difficulty by its constant tendency to prolapse. At this stage of the operation, I endeavoured to thrust part of the contents of a tin of Brand's essence into the lower end of the jejunum; in this I only partially succeeded.

I then proceeded to unite the anterior cut edges of the two viscera. This was done by ten more of the form of suture described by Billroth as Gussenbauer's, which are the same in principle as Czerny's—that is, their object is to unite the cut edges, and also the serous surfaces of the two viscera, only, in this case, the two rows of sutures are combined to form one. Two or three more superficial sutures, at each end of the incision, completed the task, and the result was what appeared to be a water-tight joint. After sponging out of the peritoneal cavity the small quantity of blood that had found its way into it, the organs were replaced, and the wound united. A dressing of Gamgee's absorbent tissue was strapped over it, and a flannel-binder applied over all. The operation lasted an hour and thirty-five minutes. The patient rallied well from it, and in an hour seemed quite herself again. Six hours after the operation, she expressed herself as feeling rather thirsty, but otherwise comfortable. I gave her a teaspoonful of Brand's essence of meat; this she swallowed without its causing any pain. I ordered, also, ice to suck every half-hour. The skin was warm; the pulse 48 per minute. I gave also an enema of three ounces of beef-tee.

January 5th, 9 A.M.—During the night she suffered no pain, and slept well at intervals. Temperature 98.4°; pulse 48. I ordered her to take a tablespoonful of milk and a teaspoonful of Brand's essence

every half-hour. She suffered no pain at all; was quite cheerful and sensible, though very weak; was not sick at all after the operation, but became gradually exhausted, and died thirty hours after the operation. There was no sign of peritonitis. I was not permitted to make a *post mortem* examination.

It may be objected that this is, in cases of cancer, at best merely a palliative operation. In this respect, I may say that it is equally valuable with gastrostomy and colotomy, and other operations for the relief of obstruction from the same cause; and these we have no hesitation in performing. If it can be undertaken earlier in the disease, I believe its results will be favourable. I also think that it ought to be done in less time than I took over it; and in this case, I should not consider it such a dangerous operation. Whether the jejunum should be approximated to the stomach by causing it to form a hernia through the great omentum, as in my case, or, as in Mr. Barker's case, by causing it to encircle the transverse colon (as, from his description, I gather it did), and so reach the anterior surface of the stomach, I am unable to say.

I think that this operation will, in future, be found a valuable addition to surgery; and I believe that Professor Billroth has proposed that it should take the place of pylorotomy.

DEATHS FROM ANÆSTHETICS IN 1885.

By ERNEST H. JACOB, M.A., M.D.

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THE following deaths occurring during narcosis by various anæsthetic agents have been recorded during the past year, or have otherwise come to my knowledge. With the view of estimating the number of administrations covered by this list, I am glad to say that, through the courtesy of the registrars and anæsthetists of St. Bartholomew's, St. Thomas's, and the London Hospitals, the General Infirmary at Leeds, and the Royal Infirmary, Liverpool, all accidents which have occurred in these institutions are recorded, so that I include no small proportion of the surgical centres of England.

Locality.	Sex and Age.	Operation for	Manner of Death and <i>Post Mortem</i> Notes.
1. Salford Infirmary.	Boy	Necrosis of leg	—
2. Glasgow Western Infirmary.	Girl	Dressing stump	Respiration ceased. <i>Post mortem</i> : Extensive thrombosis of venous system.
3. Northallerton Hospital.	Female, 57	Removal of tumour	After 90 minutes, sat up, became convulsed, and fell back unconscious. Breathing went on 20 minutes, but no pulse. No <i>post mortem</i> examination.
4. Birmingham Workhouse.	Male, 40	Innominate aneurysm	Urgent dyspnoea on lying down, and stoppage of respiration after a few inhalations. Pulse beat for 10 minutes after. <i>Post mortem</i> : Large aneurysm of innominate.
5. Guy's Hospital.	Male, 24	Dislocation of humerus	Syncope. <i>Post mortem</i> : Slight disease of large vessels.
6. Middlesex Hospital.	Female, 53	—	<i>Post mortem</i> :—Enlargement of heart and liver, and disease of other organs.
7. Langley Moor	Male, 28	Paraphimosis	No <i>post mortem</i> examination.
8. Newcastle Infirmary.	Male, 53	Cancer of tongue	Syncope at end of operation.
9. Glasgow Royal Infirmary.	Male, 45	Ligature of femoral	Syncope at end of operation on giving a little additional chloroform. <i>Post mortem</i> : Heart diseased; aneurysm of mitral valve.
10. Charing Cross Hospital.	Female, 9	Inserting drainage-tube in hip	Syncope. Patient greatly emaciated; lungs congested.
11. Newcastle	Young man	—	Syncope after partial recovery of consciousness. No <i>post mortem</i> examination.
12. London Hospital.	Male, 56	Removal of tumour of upper jaw	Became cyanosed early, pulse stopped just as operation was completed. <i>Post mortem</i> : Some fibroid degeneration of heart, and congestion of bases of lungs.

The above list shows that the deaths from chloroform occurred during an unusually severe list of operations, Nos. 2, 5, 7, and 10 only being for trivial surgical manipulations. So far as can be judged from the published accounts (which in most cases are very meagre), No. 3 seems to be a death rather from the exhaustion of a prolonged operation than from the direct action of the anæsthetic, while, in No. 4, the patient was in so dangerous a condition, that a fatal result might have been ex-

pected at any moment. No. 12 again was a serious and prolonged operation, though there was not much hæmorrhage.

The list of deaths occurring during the administration of ether includes at least one remarkable case, which I will give in greater detail.

CASE I.—This occurred in the London Hospital. The patient, a man, aged 62, was narcotised in order to reduce a dislocated shoulder. He partially recovered, but the bag (Ormsby's inhaler) was again put on his face. In three minutes he began to look pale, his breathing was feeble; dusky pallor increased, in spite of artificial respiration.

At the *post mortem* examination, the lungs were emphysematous and congested, and there was bronchitis. The heart was flaccid and fatty, with adherent pericardium.

CASE II.—This case occurred in the practice of the Leeds Dispensary. A man, aged 58, suffering from empyema, took ether in order to have the pleura incised. For about seventeen minutes he breathed well, and was of good colour. The ether was then discontinued, as the narcosis was sufficient, and no more was given. About fifteen minutes afterwards, the pulse and breathing began to fail. He seemed to die in a sort of syncope. No *post mortem* examination was allowed.

CASE III.—A girl, aged 10, much emaciated, and looking very ill, was brought to a surgeon to be sounded for a calculus. When she had taken but a few inhalations, she was observed to be very pale, the pulse ceased, the breathing continued. The usual remedies—artificial respiration, galvanism, injections of brandy, etc.—were tried in vain. The girl appeared to be suffering from tubercular disease of the kidney, but there was no *post mortem* examination.

This completes the list of casualties under ether, a very satisfactorily small record, considering the general use of ether in our large surgical centres.

The first case is one of a large number, where the narcotisation and a small operation form the "last straw" to overweigh a damaged heart and lungs.

No. 2 is difficult to explain, as at least fifteen minutes had elapsed since the patient had had any ether, which he had apparently taken very well. He was weak and emaciated, but able to walk.

No. 3 is the most remarkable case of the kind I have ever known. The patient took not more than a drachm of ether, and died in a precisely similar manner to that which generally obtains in the case of chloroform. The only case I can recall in any way resembling it is one reported some years ago, where a woman, about to have her breast removed for malignant disease, took three or four inspirations of ether from a frame-inhaler, became white in the face, and died. The question may be raised, whether this was not really a death in which fright or emotion played the principal part. It is difficult to conceive that a drachm of ether can be, under any circumstances, a fatal poison.

There have been no deaths recorded from the so-called methylene bichloride, or from mixtures of chloroform and ether, during the past year.

In conclusion, I wish to say a word on the question of publishing deaths of this kind. A gentleman holding the office of anæsthetist to a large hospital, to whom I wrote for information, expressed to me, most courteously indeed, his conviction that to publish deaths from anæsthetics was a "most pernicious custom," tending to bring trouble on young practitioners, in whose practice these accidents usually occurred. I cannot see that this need be, if no names or localities be mentioned in the report, and the details of the death be only published. Considering we are still in search of a perfect anæsthetic, it is of great consequence that all details of fatal cases should be made known; and I should be glad to publish in my yearly list such cases as are sent to me, in such a way as to avoid the recognition of the case by the public who may read the medical journals.

VIBURNUM PRUNIFOLIUM IN ABORTION.

By A. D. LEITH NAPIER, M.D.,

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WITH reference to Dr. Macle Campbell's communication regarding the treatment of abortion, in the JOURNAL for February 27th, I wish to corroborate his observations, and, at the same time, to take exception to certain inferences contained in his paper.

I have prescribed viburnum prunifolium for fully three years. I fancy I was among the first to use it hereabouts, as, when prescribed, it could not be obtained without considerable delay in Edinburgh. Being dissatisfied with the results of other preventive treatments in