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.

Assistant-Physician to the General Infirmary, Leeds.

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.,

Vice-President of the Edinburgh Obstetrical Society; and Examiner in Midwifery, at University of Aberdeen.

WITH reference to Dr. Macfie 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

some cases, and reading Lusk's recommendation (*Science and Art of Midwifery*, second edition, page 301), in which he refers to Jenk's paper in the *Transactions of the American Gynecological Society*, I gave the drug a trial, and have since used it repeatedly. In one case of so-called "habitual abortion" it failed to do good. This lady had one healthy child, then five abortions, or premature labours, at different periods; then a child born living at five months and a half, which died. She was then treated with chlorate of potash and iodide of mercury, with iron alternately, and was delivered at six months and fourteen days of a very feeble living child, now a fine healthy boy, 6 years old. Next time, when pregnant, she was ordered viburnum, but aborted at the third month. She was again pregnant, was treated with viburnum, and aborted at the second month. Possibly there was a specific element in this case, judging from the one successful pregnancy; but I have not been able to establish it.

Another patient aborted twice after marriage; when pregnant for the third time, she was treated with chlorate of potash, and delivered, at term, of a healthy child. She next aborted at the second month, in spite of viburnum. Abortion was again threatened about four months ago, but passed off after taking viburnum; and she is now fully six months pregnant. A third case had recurrent monthly uterine contractions from the second to the seventh month. Small clots and quantities of blood passed several times. In this case, bromides, in combination with nepoche, were found more effectual than viburnum. A fourth case derived benefit from viburnum, but markedly so when given in combination with nepoche and belladonna. I might adduce many more such cases in the same strain. On the whole, my impression is distinctly in favour of the drug; yet I cannot believe it to be in every case "a sure arrestor of uterine action."

With all courtesy, I must demur to the method in which Dr. Campbell's cases are recorded. Brevity excuses much, but accuracy is at times sacrificed thereby. In the first place, it is surely necessary to show that abortion was actually threatened ere we write of its arrest. Do uterine contractions never occur without separation of the decidua, or death of the fetus? Do not very many women suffer severely from pains at each monthly period, and, in many cases, carry to term without any drug? What is meant by the os dilating? Case 1, in which abortion occurred, is the only case, except 2, where the os is referred to; in Case 1, "it continued to dilate." Now, dilatation of the os, unless it be the internal os that is meant, is by no means uncommon without abortion following. Scanzoni has recorded a case, now classical, in which not only was ordinary treatment employed, but the introduction of a sound and intra-uterine injection failed to bring about "the inevitable abortion." I have mentioned cases with a somewhat similar history. (*Transactions of the Edinburgh Obstetrical Society*, vol. ix, p. 109.)

Nor do "breaking of the waters" or hemorrhages invariable end in abortion. The "flow of the waters" may be due to very active glandular secretions from the cervix; or even to the formation of, and rupture of amnio-chorial pouches, the "false bags of membranes." We often meet with the latter occurrence, one or two months before the termination of normal pregnancies. In early pregnancies I have also noted this, and observed that the pregnancy went smoothly on. Probably the fetal sac has need of more room, or there is hydramnion in such cases. Hemorrhages are too often regarded as causing miscarriage; if from the interior of the uterus, they are more likely (from disease of the membranes or death of the fetus) the consequence than the cause; if from the cervix, there is in early pregnancy no necessary disturbance of the uterine contents. Abortion may come on in these cases, as has been pointed out by Barnes (*Obstet. Med. and Surg.*, vol. ii, p. 232), in consequence of the law, "when hemorrhage sets in from any given point, there quickly follows an attraction of blood towards the point of escape."

Given a healthy uterus and a healthy fetus, it is extremely difficult to dislodge the latter, except at a monthly period. Some women abort on the slightest provocation, although seemingly healthy. Others, as I have known, may undergo the most extraordinary exertions, jump high gates, dance, or run without inconvenience. Thus, in estimating the value of any drug as an arrestor of uterine action, many side issues need consideration. At the same time, given, more especially in primipare, a gaping os with some part of the ovum protruding, attended by rhythmical uterine contractions and hemorrhage, then, if viburnum, or anything else, arrest the progress of abortion, it is well that the profession should know it. Even with hemorrhage and a patent os, if we cannot feel the ovum and the pains be irregular, while miscarriage is likely, it is by no means certain. I have seen, as must everyone with experience, many cases "settle" under most diverse treatment—sedatives, for example, opium or chloral; astringents, as gallic acid or acetate of lead, or, per-

haps better than these, hamamelis; vascular sedatives, as bromides, digitalis, antimony, or viburnum.

In typical abortion, the ovum is separated from the uterus, and hemorrhage follows; it may have caused the separation; the internal os is first dilated, then the cervix, and lastly the os externum. Now, can viburnum be depended on after such a process has begun? I think we must rather regard it as a preventive drug in "habitual" abortion, if given with a view to regulate uterine action, than as an arrestor of the immediate causes of abortion. In my own practice, I have experienced doubt when to prefer it to chlorate of potash; I have combined the drugs in some cases with good effect. In cases where we suspect constitutional affection, I prefer mercury and iron, given together, so that the former drug, while exercising its special influence, may not unduly affect the red blood-corpuscles. Iron has been looked on as an abortifacient; my experience contradicts this.

As an example of the benefits of other means than viburnum, I may mention that, ten years ago, I succeeded in bringing a pregnancy to a successful termination at full time after ten successive miscarriages.

DAMP AND DIPHTHERIA.

By H. NELSON HARDY, F.R.C.S. Ed.,
Divisional Surgeon, Metropolitan Police.

A SERIES of cases of diphtheria which has occurred in connection with one of the Dulwich police-stations, seems to show that there are good grounds for the belief that there is some special connection between damp houses and the development of diphtheria; though other unsanitary conditions, no doubt, powerfully contribute to prepare a soil favourable to the spread of the disease.

The cases I am about to relate occurred, for the most part, in the persons of strong, able-bodied young men. There was no epidemic of the disease in the neighbourhood at the time; indeed, inquiries made of the sanitary authorities of the district showed that, with the exception of the police affected, the district was singularly free from the disease; and the one thing in common to all the patients was, that they were more or less intimately connected with a damp and unhealthy station, their duty obliging some of them to live in it, and all of them to be in it for a considerable portion of each day. The station is an old dwelling-house, consisting of two storeys, not originally built for a police-station, but converted into one some years ago, before sanitary considerations began to occupy so much attention as they do now, and the water-closets and drains had never, previously to this outbreak of diphtheria, been in a satisfactory state. Two families belonging to the force had occupied the rooms not used as police-offices; namely, an inspector and his wife and family, having two rooms on the ground-floor, and one on the first-floor; and a mounted constable and his wife and children, occupying the remainder of the upper rooms.

On December 24th, 1884, a constable, aged 19, who had been less than six months in the force, and had had no previous illness while in it, had a pretty severe attack of diphtheria, was convalescent on January 7th, 1885, and was then granted a month's sick leave, returning to duty on February 7th, 1885. On January 29th, 1885, the mounted constable, aged 30, already referred to as living in the upper rooms of the station, who had been twelve years in the force, and whose only illness had been an attack of diarrhoea, was attacked, had a prolonged and very severe illness, was not convalescent till the beginning of March, and was then granted a month's leave.

On February 20th, 1885, a constable, aged 25, who had been two years in the force without any previous illness, took diphtheria, had it slightly, was convalescent on March 2nd, and was then granted a month's leave of absence.

On April 13th, 1885, a constable, aged 32, who had been six years in the force, and had no illness of importance during that time, but whose duties rendered it necessary for him to spend more hours in the station than most of the other men did, took the disease not very severely; on April 28th he was convalescent, and was then granted the usual month's leave of absence.

After this, there was a lull for about six months, during which no more cases appeared amongst those connected with the station; and it was hoped that certain measures which had been taken to remedy the sanitary defects of the building, had proved successful in checking the spread of the disease, a supply of water having been laid on to the men's urinal for the first time, and a water-closet which ventilated into the men's parade-room having been closed. I should add that the whole station is condemned, and only used until a new one can be