NEURECTOMY IN SPASMODIC TORTICOLLIS AND
RETROCOLLIC SPASM, OR TORTICOLLIS
POSTÉRIEUR.

By WM. GARDNER, M.D., C.M. Glas.
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to the Adelaide Hospital.

Note.—The history of the operation has been made as complete
as the present state of the Reference Library in Adelaide permitted,
and to my former colleague (Dr. Giles), I am indebted for this part
of the work. For the histories of my cases and the general obser-
vations, I alone am responsible.—WM. GARDNER.

The first case on record of partial excision of the spinal accessory
nerve for spasmodic torticollis is Mr. Campbell de Morgan’s,
operated on in the Middlesex Hospital, and published in 1866.
That case was an unusual one, because the spasms existed in the
sterno-mastoid and trapezius muscles on the right side, and yet
the head was drawn in to the position which is usual in contrac-
tion of the muscles of the left side, i.e., the face was turned
towards the right shoulder. The splenius and other rotatory
muscles on the same side were also affected, and this overcame
the action of the sterno-mastoid and trapezius muscles, so that in
Mr. de Morgan’s words “the posterior muscles were drawing the
face round in opposition to the actions of the trapezius and
sterno-mastoid.”

In this case, it is a significant fact that the resection of a portion
of the spinal accessory nerve entirely relieved the spasm which
existed in muscles not in any way dependent upon this nerve for
their action. Since this date, many surgeons have performed the
operation in cases of long-standing spasmodic wry neck, with
varying success; but the bulk of the evidence we have up to the
present date tends to prove that, in the majority of cases, surgical treatment is undoubtedly attended by beneficial results.

Amongst the many cases published, illustrating the beneficial effects produced by excision of a portion of the spinal accessory nerve, we have selected three, operated upon by Mr. F. A. Southam, whose paper on the subject appeared in the *British Medical Journal* of January 31, 1891. In each instance the spasm chiefly involved the sterno-mastoid muscle, and was of such a severe description that the patients were completely incapacitated. This distressing condition had been present for months, in spite of every ordinary method of treatment (*e.g.*, pot. bromid. in large doses, galvanism, massage, counter-irritation, &c.), and had come on without any apparent cause. The operation is described as follows:—The patient having been prepared in the usual manner, an incision about three inches long is to be made, descending from the apex of the left mastoid process along the anterior border of the sterno-mastoid. The external jugular vein may interfere with progress, in which case it should be tied and divided. The edge of the sterno-mastoid having been raised, the posterior belly of the digastric muscle is next exposed, and after a little more dissection, the spinal accessory nerve will be brought into view. The points to be borne in mind are:—(1) That the nerve lies deeply beneath the muscle, necessitating a free incision to expose it; (2) The anterior edge of the sterno-mastoid muscle must be drawn well back, for the nerve is by no means near the anterior border; (3) It runs almost vertically; (4) It enters the deep aspect of the muscle at about the level of the angle of the jaw.

In each case, Mr. Southam tells us that he excised about one-third of an inch of the nerve trunk just before it enters the under surface of the muscle. The immediate effect of the operation was to completely paralyse the sterno-mastoid, the spasm ceased, and the position of the head became greatly improved. The head does not become quite straight immediately after the spasm has ceased, on account of a general shortening which takes place in the muscles of the neck, doubtless owing to the long continued faulty position in which the neck has been held. By degrees this can be overcome by straightening the head two or three times a day, assisted by an artificial muscle. An elastic band fixed above to a cap and below to a plaster of Paris bandage round the waist will effect this purpose. The band must be so arranged that the extension acts in a line with the unaffected sterno-
mastoid. This apparatus should be worn until the head has regained its normal position. Up to the present date, Mr. Southam has performed this operation ten times, and his results warrant him in recommending the adoption of this plan of treatment in suitable cases. He states that "the most suitable cases for operative interference, are those in which the spasm is tonic in its nature and confined to the sterno-mastoid; but even if the other muscles become involved, excision of a portion of the spinal accessory nerve is still worth a trial, for no other plan of treatment is likely to be attended by such satisfactory results."

M. Petit, in a contribution to the *Revue d'Orthopedie*, of July 1891, analyses twenty-six cases operated upon by him, and speaks very encouragingly of this method of treatment. Of the cases dealt with (twenty-six), thirteen were perfectly successful, seven were much improved, two were slightly better, three enjoyed only temporary benefit, while one patient died from phlegmonous erysipelas. He prefers dividing the nerve in front of the sterno-mastoid muscle. His experience is that patients are seldom cured immediately, spasmodic contraction of other muscles than the sterno-mastoid and trapezius, which, of course, are paralysed, remaining for a while. By degrees these secondary movements disappear. In a small proportion of cases, however, these secondary movements persist, and in such conditions the posterior branches of the upper cervical nerves should be divided. Petit advocates long continued massage of the muscles after operation, and also advises that an apparatus should be worn for months to support the head.

In June 1890, Mr. Mayo Collier published a paper, in which he claims to have successfully relieved a case of spasmodic torticollis by ligaturing the spinal accessory nerve. The patient had suffered from the disease for seven years, and no benefit had been derived from other treatment. He made an incision at a point where the nerve emerges at the outer border of the sterno-mastoid. Taking the nerve as a guide, he tunnelled through the muscle for some distance and then placed a ligature of silver wire around the nerve trunk as high up as possible, and the ends were twisted enough to ensure slight compression. The wound was brought together and the skin allowed to grow over the ends of the wire loop which apparently caused no trouble. The spasms ceased at once and several months elapsed without sign of any recurrence. The free movements of the sterno-mastoid and trapezius were not diminished.
In the *Lancet* of June 18, 1892, Mr. Pearce Gould places on record an instance of this distressing malady cured by avulsion of the central end of the spinal accessory nerve. He operated in 1885, after the disease had existed for eight years; as the jerking of the head persisted with the greatest obstinacy, and the patient's condition appeared to be gradually getting worse. The operation was performed upon the lines already laid down, and when the nerve was exposed, a sufficient amount of traction was applied to pull the long slender nerve out of the jugular forearm. No special symptoms were noticed from the tearing of the nerve roots, the wound healed without complication, and a perfect cure resulted of a permanent character. The same surgeon has operated in two other cases with equally encouraging results.

Mr. Edmund Owen, at St. Mary's Hospital, London, operated on November 21, 1891, on a woman who, for about three years, had suffered from exhausting spasmodic contractions of the left sterno-mastoid, the face being turned to the right side and the chin thrown violently upwards. The spasms had steadily increased, until her life was positively unbearable. In the following May she presented herself for examination, when she was able to hold her head straight, had perfect control over it, and was well satisfied with her condition.

At a meeting of the Bradford Medico-Chirurgical Society, held on December 1, 1891, Mr. Appleyard exhibited a woman on whom he had operated for spasmodic torticollis of gradually increasing severity, with the result that a complete cure followed.

Many other surgeons have had equal success after removing a portion of the spinal accessory nerve, when all other methods had utterly failed to relieve the spasm.

*(To be continued.)*

**DIFFICULT LABOUR AFTER EMMET'S OPERATION.**

*By J. W. Dunbar Hooper.*

Hon. Surgeon to the Women's Hospital.

In the notes on this subject which I communicated to the Journal in August last, it was clearly shown that, during the labour, the cervix was fully dilated or "thinned out" over the presenting portion of the fetus, but the os externum (as formed after some Emmet's operations) was undilated. Because the os was unable to yield to the usual forces of parturition, the cervix,
stretched to its utmost, ruptured, and hence the danger in the labour. The distinction is an important one to practical men. Since my last communication, I have personally attended two more cases bearing on the relationship of trachelorrhaphy to subsequent parturition.

**CASE I.**—In October 1891, I performed an Emmet's operation on Mrs. O. R., at the Women's Hospital, for an extensively lacerated and eroded cervix. About fifteen months previous to this date, she had borne a living child without medical assistance. Owing to the extent of the erosion, I could leave no portion undenuded of mucous membrane in the centre of the cervix, as recommended by Emmet. But I frequently passed the sound afterwards and kept the canal patent.

At noon on October 12th of this year, I was called to attend her, when she had been twenty hours in labour. For five hours the pains had been strong and regular, but the midwife said that the os was not open, though the liquor amnii was coming away. Even by using Sims' speculum, under chloroform (as in previous cases), I could detect no visible spot to represent an os. A hard cicatrix was situated fairly in the centre of a very thin and well dilated cervix; there was a distinct stellate tear above its anterior margin. I incised and dilated the region where the os should have been, using Hegar's dilators, and then completed delivery with forceps after three hours' steady work. The parts were well irrigated with Hg. Cl₂ solution (1-3000) and she made a good recovery. The presentation was L.O.A., and there was no other cause of dystocia.

The risks of complete rupture of uterine tissue above the cervix, together with the protracted period of labour, formed a marked contrast to the previous confinement. Yet I carefully performed the operation myself, for a legitimate purpose, although I was unable to completely carry out the plan of the originator.

**CASE II.** exemplifies the conditions where the cervix as well as the os externum are undilated. Mrs. A. P., aged 26 years, and married 10 years, had two living children, each confinement being rapid, according to her own statement. About fourteen months after the birth of the second child she consulted a medical man for mild epileptiform seizures. The catamenia were regular and painless. He discovered a laceration and erosion of cervix, and performed an "Emmet." Owing to the patient's misconduct, inflammation (termed peritonitis) followed, and subsequently the
operation had to be re-done in January 1891, but the fits increased in severity and frequency, and ultimately, through no fault on the part of the operator, she passed out of his control.

I saw her once in consultation with another medical attendant. We found the os externum completely closed, the fundus uteri swollen and tender, and a large soft swelling in the right broad ligament. It was now ascertained that the catamenia had been absent for thirteen months; and later on, under an anesthetic, her medical adviser allowed some dark grumous fluid to escape, by incising the situation of the os externum, and then the uterine cavity was irrigated with an antiseptic solution (thymol). Her general health rapidly improved, the catamenia became regular, and in January 1892 she conceived. She had no further trouble until the night of October 13, when she sent for a doctor, having been some twelve hours in labour. The midwife in attendance reported that the pains were strong and regular, but the doctor on examining at 8 p.m., could only just pass a sound into the os externum, and the cervix was unobliterated, about three-quarters of an inch deep, very rigid and indurated. Four hours later there was not the least improvement; the uterine contractions were still powerful, and the liquor amnii was dribbling away. Then, under chloroform, the cicatrix of the trachelorrhaphy was freely incised with a protected bistoury, through the cervical tissue, and dilatation commenced with the blade of an ovum forceps, which was the only suitable instrument at hand. He subsequently inserted a forefinger, but could make little progress. I was sent for at 6 a.m. on the 14th, and found the condition as described, and the patient very exhausted. Chloroform was re-administered, and I tried dilatation with Barnes’ bag, having first, by means of Sims’ speculum, seen that there was no rent beyond the lower cervical zone. Very slowly the indurated tissues yielded, and I found the right shoulder presenting, and a placenta prævia marginalis on the left side of the ring of Bandl; its separation caused very profuse hæmorrhage. The child was delivered by version, and lived a few days. Placenta was easily extracted, and the uterine cavity carefully irrigated. I was told by her medical attendant that there was no further trouble with the puerperium.

A logical conclusion drawn from an impartial consideration of these five cases would be, that in each woman, dystocia was the result of an operation performed for lacerations of the cervix.
It is not always possible to perform trachelorraphy exactly on the lines laid down by Emmet. No one disputes the fact that the operation has a definite field, in which considerable service has already been done. On the other hand, it is quite patent to general practitioners that some gynaecologists have, of late years, greatly abused the scope and principles of the operation, so much so, that it has been "over-done." Even with the laity, the operation is certainly falling into disrepute.

My main object in recording these cases is to draw attention to one of the disadvantages which may, perhaps unexpectedly, occur to a woman on whom trachelorraphy has been performed. Probably a specialist performing the operations is unfamiliar with their subsequent complications, as he, not practising midwifery, seldom has the opportunity of treating them himself. Certainly, a practical accoucheur will appreciate the difference in attending the confinement of a patient on whom an "Emmet" has been previously performed, compared to the usual chain of events in an ordinary labour, where the cervix has not been subjected to trachelorraphy.

With reference to the statement in the September number, that a sponge tent should be employed in the treatment of non-dilating cervix, I believe that, in these days of aseptic surgery and obstetrics, the sponge tent is regarded as obsolete.

A CASE OF PNEUMONIA CURED BY THE USE OF OXYGEN.

By F. CLAUDE EVILL, M.R.C.S., L.R.C.P. Lond.
Hon. Physician, Broken Hill Hospital, N.S.W.

The attention of the profession was recently drawn to the use of oxygen in the last stages of pneumonia by Drs. Lauder Brunton and Marmaduke Pritchett in the British Medical Journal of Jan. 23rd of this year. Since that date, many numbers of the Journal have contained reports of cases in which this treatment has been carried out, but with very varying success. I find on searching the Journals up to date, that in four cases out of eight of pneumonia reported, the use of oxygen in all probability saved the patient's life. In the remainder, either the remedy was used too late, or the conditions were such as the gas could not alleviate. The following case is well worth reporting, as the patient was in articulo mortis at the time the oxygen was administered, and his constitution had already been severely tested by a previous attack
of the same complaint from which he had quite recently recovered.
The notes are supplied by Dr. R. Horne, Resident Surgeon to the
Broken Hill Hospital:

W. H. W., æt. 39, single, blacksmith. Previous History.—
Twenty years ago had attack of pneumonia, followed by erysipelas
in the head. No sickness since. No cough.

May 2, 1892.—Was admitted under my care into Broken Hill
Hospital with severe attack of pneumonia; both lungs affected.
Patient made a good recovery, and was discharged July 1 conva-
lescent, and with both lungs normal.

July 11.—Patient re-admitted, complaining of loss of power in,
and wasting of, extensor muscles of legs. This condition yielded
rapidly to treatment with the interrupted current, and the patient
was removed to the Convalescent Ward of the Hospital.

August 3.—On the previous night, the patient got out of bed
to assist the wardsman in controlling a man in a fit; the night
was cold, and he had no clothing on besides his nightshirt; he
cought a chill, and on this morning had a rigor. His temperature
rose to 103° F.; he had severe pain in his right side on respiration,
and a troublesome cough with rusty expectoration. Examination
showed dulness and fine crepitation at both bases, with friction
sounds in the right axillary line. (R. P. hyd. subchlor. gr. ij
statim, et mist. senegae. c. ammon., 4 tis horis).

August 4.—Dulness increased, and left lung more affected.
Temperature 102-4°.

August 5.—Temperature fell to 100° in the morning, when
patient had troublesome vomiting, checked by bismuth mixture.
(R. Adde mist. senegae. c. ammon., tr. digitalis m. iv, et liq.
strychn. m. iij).

August 6 and 7.—Patient's condition gradually became worse;
respiration and pulse increasing in frequency; pulse becoming
weaker, and respiration more difficult. Expectoration muco-
purulent and very profuse; temperature keeps at about 103°.

August 8.—Temperature in morning 102°; some diarrhoea,
stopped by starch enema. As day went on, patient apparently
sinking fast. Profuse cold sweats, general cyanosis, face almost
purple. Chest "water-logged;" the trachea and large bronchi
choked with mucus, and the patient quite unable to expectorate.
Pulse 130, soft, flickering and intermittent; temperature fell to
below 97°. (R. Tr. digitalis m. x, liq. strychniae m. viij every
hour. Liq. strychn. m. v, also given hypodermically at 8 p.m.)
At 6 p.m., began to administer oxygen from a bag used for lime-light purposes. The first dose, given through tube into nostrils, had a marvellous effect, the cyanosis completely disappearing; and the pulse greatly improving immediately, and the patient, who was never completely unconscious, recovering sufficient strength to expectorate. In about three minutes, he relapsed into his former condition. A fresh dose of oxygen again restored him, and after the administration had been kept up at short intervals for an hour and a half, patient seemed sufficiently recovered to be left for a short time. However, at 8 o'clock he seemed again sinking fast, and was almost pulseless. A hypodermic injection of ether was given, and the oxygen again exhibited. Dr. Horne kept up the administration of the gas for ten minutes at a time, at half-hourly intervals till 3 a.m. After each dose, patient gained sufficient strength to expectorate. At 12, he had slight trismus and spasms in the back after taking the oxygen, so the large doses of strychnine were stopped, and instead R. Tr. digitalis m. vij, sp. æth. m. xv, sp. amm. aromat. 3 ss. was given hourly.

August 9.—After 3 a.m., Dr. Horne gave the inhalations at 5, 7, 9.30, 12 noon, 3 p.m., 6.30 p.m., 11 p.m.; and the last dose was taken at 3 on the morning of August 10, the oxygen having been administered at intervals for thirty-three hours. From that time patient made an uninterrupted recovery, without one unfavourable symptom. Each dose of oxygen he had received gave him a fresh lease of life, and enabled him to relieve his lungs of the load which was asphyxiating him, giving him also the strength to take nourishment. During convalescence, patient had again the wasting and loss of power in the extensors of the legs, which satisfactorily answered once more to the use of the interrupted current.

In this instance, Dr. Horne and I attribute the patient's recovery undoubtedly to the oxygen, without which he certainly would have died. No doubt his restoration was aided by the somewhat heroic quantities of strychnine he absorbed, but that alone would have availed him nothing. Most unfortunately, in this remote part of the colonies, the obtaining of oxygen in a usable form is attended with great difficulties, the price of the imported gas in cylinders, being almost prohibitive for hospital use. Therefore we, and the patient much more so, were much indebted to Mr. Counsell, the Hospital Dispenser, who was able to manufacture the gas and store it in a bag he used for lime-
light purposes. This bag ensured a gentle graduated flow of gas, and, though more bulky, was as convenient as a cylinder.

The use of oxygen has, doubtless owing to the difficulties formerly met with in procuring the gas, been till lately much neglected. Its use is not of recent origin, though the revival is recent. Undoubtedly in all cases of threatened asphyxiation, especially if due to the lungs becoming "water-logged" with muco-purulent secretion of which the patient is too weak to relieve himself, its use is indicated. It may, as in the case reported, just give the patient, in addition to complete (temporary) relief from over-loading of the right heart, the sufficient strength to relieve himself of a portion of the secretion blocking his respiratory organs. In cases, however, where death is imminent from failure of the heart, where the extent of lung surface equal to the ordinary task of respiration is comparatively large, as for instance in cases of pneumonia, where the disease has been complicated with obstinate diarrhoea, the employment of oxygen cannot be expected to have such good results. In one such case, in which we employed it in combination with strychnine—without much hope for good results, but as giving the patient a last chance—it completely failed, the patient not even making a temporary rally. The gas should be administered through the nose, the nostril unoccupied by the tube being closed by the administrator during inspiration, and released during expiration. The amount given, and frequency of giving it, must of course be regulated by the necessities of the individual case. I feel quite assured that, if oxygen is only at hand, and is properly used, the lives of many pneumonia patients may be saved, which otherwise must be inevitably lost.

SUPPOSED POISONING BY THE DAILY USE OF BI–SULPHIDE OF CARBON.


On the evening of September 26, 1892, I was called to see A. W., aged about 26, who presented the following symptoms:—Great prostration and giddiness, occipital headache, severe pains in the back of the neck, muscular pains in the upper and lower extremities; great lumbar weakness, an indefinable prickling sensation and sense of anaesthesia in the upper and lower limbs; respiration shallow, but not increased; temperature 100° F.;
pulse small and easily compressible (72 per minute); the first sound of the heart scarcely audible, and the second distinctly accentuated; some little nausea and thirst; bowels natural; urine apparently normal. Patient in bed.

He was treated with tinct. of digitalis and diaphoretics, and next day the temperature was 99°F., and the nausea had disappeared, while the first heart sound was quite distinct and the accentuation of the second had disappeared, the pulse being of the natural fulness. The occipital headache still continued, and the muscular pains at intervals, but the feeling of general weakness was less.

The following day the temperature was normal, the appetite good, and a feeling of increased vigour; the headache, muscular pains, and prickling sensation having disappeared.

On the fourth day, the patient got up and felt quite well. The patient had no rheumatic history.

For about three weeks previous to September 23, A. W., along with a friend, was engaged almost daily in distilling shales, and then fractioning the oils produced. They were all hydro-carbon oils, ranging from the lightest napthas to heavy black oil (specific gravity about .88). When they stopped these, A. W. was, with his friend (but A. W. more extensively), freely using bi-sulphide of carbon (C. S₂) in treating bitumens until September 22. On the 23rd, the only chemical he used was H. Cl. in small quantity. On the 24th he was out of town, and felt no symptoms until the 26th. A. W.'s friend, who worked with him in the laboratory contemporaneously, was laid aside with exactly similar symptoms, save that in his case the prickling sensations were absent.

On referring to A. W. Blythe's work entitled "Poisons, Effects and Detection," under chronic poisoning by C. S₂, the effects produced on workers who used the reagent for dissolving caoutchouc, &c., in the preparation of gutta-percha are described. The symptoms have considerable analogy to the above. There is more or less permanent headache with loss of appetite, nausea, curious sensations of creeping, while pains in the limbs are a constant phenomena, with more or less anaesthesia of the skin. Besides these, there are more pronounced additional symptoms, which might be accounted for by the more prolonged use, and the daily exposure to a much larger amount of the vapour of C. S₂ which obtains in the case of the workers mentioned.

The interesting question is, as the symptoms did not develop themselves until the fourth day after ceasing to use the drug,
whether this lapse of time is in accordance with the experience of other observers. The simultaneous illness of two engaged in using the same reagent, the almost identical symptoms, and their recovery after the same periods, certainly furnish grounds for believing that the symptoms mentioned might be produced by bi-sulphide of carbon.

Medical Society of Victoria.

ORDINARY MONTHLY MEETING.

WEDNESDAY, DECEMBER 7TH, 1892.

(Hall of the Society, 8 p.m.)

The President, Professor Allen, occupied the chair, and there was a good attendance of members.

The minutes of the preceding meeting were read and confirmed. One nomination of a new member was received.

Nomination of Office-Bearers for 1893.

The following gentlemen were nominated as Office-Bearers for 1893:—President—Dr. Gresswell and Mr. C. S. Ryan; Vice-Presidents (2)—Drs. Adam, J. W. Barrett, Gardner, Grant, McInerney, C. S. Ryan, Rowan, and Snowball; Hon. Secretary—Dr. W. Moore; Hon. Librarian—Mr. J. H. Webb; Hon. Treasurer—Dr. Adam and Dr. Jamieson; Committee (10)—Drs. Adam, Allen, J. W. Barrett, F. D. Bird, Balls-Headley, Gardner, Hinchcliff, Girdlestone, Gresswell, Jamieson, Maudsley, J. P. Ryan, Syme, J. Williams, G. T. Howard, A. J. Wood, Grant, Honman, O'Sullivan, Rowan, Jonasson, Gray, Astles, FitzGerald, F. J. Owen, Mollison, Davies, Small (Geelong), Woinarski (Ballarat), Hewlett, McInerney, and W. R. Boyd; Auditors (2)—Drs. Barker and Bennie.

N.B.—Any gentleman wishing to have his name withdrawn, should communicate with the Secretary before the next meeting of Committee.

Exhibits.

Dr. Gardner exhibited a case of Ectopia Vesicae, upon which he had operated by a modification of Wood's operation, and had obtained primary union throughout. The abdominal flap was
attached to the cut edge of the skin surrounding the bladder, except at the point where the urethra has to be constructed. The lateral flaps are so fashioned as to cover in the raw surface of the turned-down abdominal flap, and the upper margin of each of them is attached to the top of the surface left by the detachment of the abdominal flap. By freeing the skin and sliding it, no part of the raw area is left to granulate.

Dr. Barrett exhibited the case of a woman, aged 35, who gave the following account of herself:—She had been suffering from deafness and tinnitus for ten weeks, which came on after influenza. Both she and her husband suffered from bad colds, sore throats, and rashes on the stomach and thighs, four months since. She has borne four children, all living, and has had one miscarriage, the child being still-born. Her hearing is—Watch, right nil, left contact; fork, right nil, left nil. The membrana tympani of both ears is fairly normal. There is no evidence of syphilis. Such is the patient's statement. Her hearing however, as estimated by the watch or tuning fork, varies from day to day. As a matter of fact, whilst protesting that she is deaf to such a degree that she cannot hear unless people shout at her, she hears accurately conversations in a tone very little above a whisper. It is obvious, that her trouble is mental. He (Dr. Barrett) exhibited the case as an admirable illustration of the type which is so successfully treated by our electric healers and clairvoyants.

Dr. Moore then showed a patient from whose thigh he had removed a large tumour, and about whom he furnished the following notes:—

A. S., æt. 24, was admitted to the Melbourne Hospital on September 26, 1892, suffering from a large rounded, elastic tumour, situated at the back and inner side of the right thigh, and extending from a little below the pelvis almost to the knee. There was a recent scar about an inch long over the lower and back part of the tumour. Several glands in the groin were enlarged. The sartorius muscle was stretched over the growth; there was apparently no connection with the bone. Two years before, he first noticed a small lump in the upper and inner part of the thigh; this grew very slowly for eighteen months, but during the last six months it had increased rapidly. About a month ago, in the Dunedin Hospital, an incision had been made into the tumour, a small portion of which was removed and examined, and
the patient was advised to submit to amputation at the hip joint. This he declined. At a consultation of the staff, it was decided that an attempt should be made to remove the tumour. This was done on September 29. An incision, seven inches long, was made along the anterior border of the tumour, through this incision the tumour was easily freed from the large vessels of the limb; then an incision of the same length was made along the posterior border of the growth, and its detachment completed. Then the tumour was pushed out through the anterior wound by the hand passed in through the posterior incision. The scar at the back of the thigh was freely excised. There was very little hæmorrhage. The wound was irrigated with perchloride of mercury lotion (1 in 1000); the large incisions were completely closed by wire and horse-hair sutures, and a rubber drain was introduced through the wound made in excising the scar. Perchloride gauze was used as a dressing. For a week, there was a slight rise of temperature; it was necessary to replace the rubber drain-tube by a glass one; the drain-tube opening was somewhat slow in healing. The glands in the groin increased slightly in size, and on October 5 they were removed. The patient was discharged October 25. The wounds are now all soundly healed, and there is no trace of a recurrence.

The tumour was examined by Dr. Mollison and pronounced to be a hæmorrhagic sarcoma. Its wall varied in thickness from half an inch to an inch, and was composed of spindle cells; the cavity contained blood. The enlarged glands were not of the same structure, and were probably the result of irritation from the wound.

Dr. O'SULLIVAN showed two specimens of uterine fibro-myoma, successfully removed by hysterectomy; one (vide Australian Medical Journal, June 1892) represented the multi-nodular, the other the soft oedematous variety. Concerning these exhibits, he has supplied the following remarks:—

It gives me much pleasure to be able to place before you two specimens which will exemplify, most clearly, the classification of “Fibroids,” so happily inaugurated by Lawson Tait about eight years ago. On a previous occasion, I dealt at some length with the nomenclature and etiology of these tumours. I shall to-night shortly contrast the two varieties.
**SOFT ÖDEMATOUS.**

1. Solitary. No subsidiary growths ever appear, and may be easily enucleated if seen early.

2. Very soft and uniform, often resembling a pregnant uterus; yields abundant serum on incision, and does not bleed.

3. No respecter of age, though preferring the old. Grows exogenously, and is entirely independent of menstruation.

4. The growth of the tumour is not affected by the "climacteric."

5. Excision of appendages proves utterly futile. This demonstrating an exemption from the nerve control which regulates the periodic uterine losses.

6. Rarely attended with any undue loss of blood *per vaginam.*

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**HARD MULTINODULAR.**

1. Multiple, and consists of masses of all sizes, which look as if they got promiscuously entangled in the uterine tissue. Their enucleation is difficult and of no avail.

2. Very dense; yields no serum on incision, but bleeds freely.

3. Essentially a disease of menstruation, and is *endogenous* in its growth.

4. It is arrested in growth, and tends to diminish in bulk after the menopause (which it may indefinitely postpone).

5. Its growth, and any attendant menorrhagia, or metrorrhagia, are promptly terminated by removal of appendages, and under the age of 40, the tumour generally disappears altogether.

6. Often involves exhausting haemorrhages.

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One of the most brilliant young gynecologists of our time, Dr. A. W. Johnstone, after a careful microscopic examination of a soft edematous myoma, came to the conclusion that it consisted of lymphoid tissue, and was practically "a homologous growth of the adenoid lining;" but he is unsupported in this view.

Lawson Tait, to whose scientific penetration and practical achievement we owe so much, refers the tumour to the non-striated muscular fibre of the part, with its special fusiform cells and rod-shaped nuclei.

It has a distinctive structural peculiarity; its fibres being widely separated in all directions, by cavities filled with serum, and "mush," which is nothing more than broken down effete cells.

The multi-nodular tumour has its fibres closely packed, and is not honeycombed in structure. These considerations, together with the fact that the soft edematous myoma is not amenable to removal of appendages, nor under the control of the nerve centres, which regulate the uterine functions, lead me to conclude, having due regard to the evolution of such diseases, that, if we are not here dealing with a truly malignant neoplasm, we are, at least, on the borderland of malignancy. However, be this as it may, there
can be no question of the important and marked practical differences between this rather uncommon tumour, and the prevalent simple nodular fibro-myoma of the uterus. It is to be hoped that Mr. Tait, to whom is due the credit of having elucidated the pathology of those neoplasms, and of having demonstrated their many points of difference, will, at no distant date, complete his achievement by endowing the fatal soft myoma with a distinctive name; a name not shared by a class of tumour comparatively harmless.

The operation which I performed in both those cases, may be shortly described as supra-vaginal amputation, after the manner of Schröder, with ligature of the uterine arteries, and intra-peritoneal treatment of stump. Both patients are now, after an interval of four months, in perfect health.

Dr. O'SULLIVAN also exhibited a specimen of malignant disease of the uterus removed from the case described in the following paper, which was then read:—

THE VERÆ CAUSAÆ OF CANCER.

By M. U. O'SULLIVAN, L. et L.M.R.C.P. et S. Ed.
Hon. Surgeon Women's Hospital.

In view of the greatly enhanced prevalence of malignant diseases, and of the ever increasing number of victims those loathsome and repulsive affections are claiming at our doors, no man can deny their high claims on our attention, and it would seem not unreasonable to hope that an intelligent discussion of their etiology may be productive of much good. With this object I will preface an account of a case of removal of the uterus for malignant disease, by some remarks on what I have termed the veræ causæ of cancer.

It seems to me a strange anomaly that we should devote so much time and attention to maladies of phenomenal rarity, such as leprosy; while we look on with perfect indifference at a class of disease of every day occurrence, whose genesis is directly due to an abrogation of nature's simplest laws, and is so amenable to prophylaxis.

Nobody will question the greater liability of the female sex to cancerous diseases. The statistics from the Registrar-General's fifty-second annual report show that of every twenty-one men, and every eight women, who live to be thirty-five years of age, one will respectively die of cancer.
The Verne Cause of Cancer.

In the great majority of instances, the female uterus and breast are the parts attacked; while men are enormously more prone than women to malignant affections of the tongue, buccal tract, oesophagus, and stomach, and it is an interesting and significant fact, that when we investigate parts not influenced by marked differences of function, or the mode of life characterising the sexes—what may be termed neutral ground, such as the internal viscera, lower part of the intestinal tract and lymph glands—we find both man and woman appear to suffer in equal proportion.

Time will not permit me to travel into the fields of exemption in woman and proclivity in man. I will confine myself to that province in which the peculiar liability of women to malignant disease is displayed—the uterus and breast. Why are malignant diseases of these organs so frequent?

As the cardinal feature in all cancer growth is an abnormal cell proliferation, it is reasonable to assume that any organ specially rich in cell elements would be much more liable to malignant developments than one not so circumstanced; but when we come to consider that the lymph glands and liver, organs markedly parenchymatous, do not show any special tendency of this kind, it is evident that we must look for some additional causation factor.

Now, there are certain conditions found in the uterus, or at least that portion of it whence malignant growths almost always spring—its lining membrane—which at once suggest a special liability to cancerous diseases. Here we find the cell elements undergoing frequent modifications and changes in their growth and arrangement, and here the nervous system exercises the most absolute control over those histological variations (as demonstrated in the menstrual process). As soon as the malignant process is initiated, the normal healthy ratio of cell elements to well formed tissue is lost; the little specks of protoplasm or cells which form the bulk of every malignant tumour appear to throw off all allegiance to the central nervous authority, and seem no longer subject to the laws which regulate the healthy organism; they proliferate luxuriantly, are nourished, and grow—as all parasites do—at the expense of the host which affords them shelter.

In by far the majority of instances of malignant disease of the uterus and breast, the variety is carcinoma, of which of course the glandular lining is the parent tissue. What antecedent
history do we generally get? In a comparatively small number of instances, we find cancerous formations initiated by direct mechanical injury or irritation, the net result of which must be brought about by lowering the vitality of the part, and destroying, more or less, the physiological balance of its tissues. Cancerous growths of the connective tissue variety (true sarcomata) appear generally to follow some sudden rupture or other injury of connective tissue elements, by a blow or strain. The injury is often of a trivial and passing character, does not give rise to the slightest suspicion of serious consequence, and is soon forgotten.

In squamous epithelioma of mucous surfaces there must, almost of necessity, be a superficial lesion—a crack, cut, or abrasion as a starting-point. Then, "the door for the initiation of the cancerous process, is thrown widely open" (Snow), and continued irritation of the adjoining tract does the rest. The mechanism of production of a small percentage of breast carcinoma may be explained in this way, and I have no doubt we may, without fear, ascribe a few examples of the uterine disorder to a similar agency.

Before quitting this, the most palpable factor in the etiology of the cancer group, I would fain direct special attention to the manner in which such specialised papillae of the skin as hair, feathers, and teeth are developed. The researches of histologists have established conclusively the truth of the contention that these structures, as well as glands of all kinds, are developed essentially on the same plan as cancers—an epithelial down growth into the subjacent tissues. It is undoubtedly an interesting and suggestive fact, that abnormal irritation will frequently produce hair in an unusual situation, and we are all conversant with the elongation of cutaneous papillae into warts under similar circumstances. In like manner, glands will respond to irritation and grow, but the point which I would emphasise is, that a continuance of those conditions will frequently lead to the development of cancer.

Bland Sutton describes cancers as "adherent glandular formations that grow aimlessly, and have no function to keep them in subjection." This view gains weight from the fact, that in their intimate structure they resemble the glands in the immediate neighbourhood of which they grow. Thus, cancer of the lip resembles cutaneous glands; in the liver, it mimics the liver; mammary cancer resembles imperfect mammary tissue, and so on.
In the large majority of those cases of cancer which are met with in every-day practice, and furnish the bulk of mortality statistics, no such mechanical exciting cause can be detected. We must, therefore, look for some other explanation of the malignant tendency and chronic invalidism, which would seem to have become the heritage of the civilized woman. This we will readily find in various depressing neurotic conditions. Herbert Snow has laid it down as an axiom, that failing a mechanical exciting cause, a neurotic is always to be found.

It must here strike us as noteworthy, that not only is it the more neurotic and emotional sex which principally suffer from cancer, but also that the organs most prone to diseases of this class are in health, specially influenced by emotional conditions, and by abnormal states of the central nervous system, as I have already indicated. If we carefully investigate the personal history of cancerous patients, we cannot avoid being struck by the large number who tell us of some immediately antecedent trouble or anxiety.

Most recent systematic writers agree, that mental distress ranks as the first and most constant factor in the genesis of cancer; but the undoubted agency of several others, such as exhausting toil and prolonged illness must not be lost sight of, as they constitute a weighty addition to the many other influences that promote its development. Everybody must have seen cases which will establish beyond doubt the reality of this connection. The immediate sequence is a matter of daily familiarity. I myself have met with many instances in which the cause and effect seemed so obvious and decisive that, to question their close relationship, would seem like struggling against the inevitable.

There are some other general factors bearing on this aspect of woman's health, and the rapidly increasing prevalence of cancer, which, though apparently trivial at first sight, demonstrate very forcibly the truth of the old proverb, that "great events from little causes spring." I will merely mention the most serious and noticeable amongst them:—Constipation, tight lacing, excessive use of neurotics—tea and coffee, "cramming" at school. The modus operandi of such agencies has not been clearly explained; but there is little doubt, that they act by producing defective innervation and depressed nutrition.

It is only during the past few years that cancers have come to possess any really scientific significance. In the light of recent
biological research, it does not appear improbable that they are, like infective tumours (Paget’s "Disease of Breast and Actinomycosis"), directly due to the growth of some specific micro-organism, vegetable or animal. This would seem to be the most rational hypothesis, and the only one that will satisfy all the requirements of the case, and explain all its facts and phenomena. Although no specific micro-organism has, up to the present, been cultivated, there is little doubt that we are already on the threshold of this great scientific achievement. The evidence of most leading pathologists points to its early realisation. We find Hanau of Zurich, Weber and Eiselberg, successfully transferring or engrafting epithelioma, carcinoma, and fibro-sarcoma from one animal to another. We find Professor Kubasoff, of Moscow, after a long period of bacteriological research, arriving at the conclusion, that cancerous growths are caused by a special pathogenic, rod-shaped microbe which, when inoculated under the skin of animals, gives rise to cancerous degeneration, commencing in the nearest lymphatic glands, and subsequently spreading to the internal organs. We find that Albarrau, Darier, Thoma and Wickham have found an organism in cancer which they describe as belonging to the protozoa. We find Delepine, Duplay, and Cazine demonstrating the presence of psorospermiae and coccidiæ in epithelial tumours and cancers. We find Sudakewitch, who has obtained specially good results in his experimentations, demonstrating most accurately certain micro-organisms which Metchnikoff asserts are nothing else than psorospermiae and coccidiæ. We find Dr. W. Russel describing, before the Pathological Society of London, the existence of protoplasmic bodies, which he terms the characteristic organisms of cancer, and which are now known as fuchsine bodies. Woodhead, in his "Practical Pathology," just published, says:—"There can be no doubt whatever, that the organisms to which Dr. Russel draws special attention, are similar to those described by other observers as psorosperms." Whether these parasitic bodies originate the malignant process, and are the cause of cancerous infection, or whether they result therefrom, has not been finally decided; but when we consider that all recent biological research has proved their occurrence in the epithelial cells, and that they undoubtedly give rise to cell proliferation, as proved in the lower animals, we must, at least, admit the strong probability of their causal agency in the production of cancers.
I shall not to-night dwell at any greater length on those many general causes which help to produce so deplorable a condition of things amongst our womankind, than to indicate:—

(1) That whatever produces chronic ill-health depresses the nervous system, and is clinically found to constitute an influence strongly predisposing to cancerous developments generally.

(2) That local agencies exert only a minor influence in their direct genesis.

(3) That while rapidly increasing in prevalence in civilised nations, they are almost absent amongst the savage.

(4) That malignant disease is in very many instances primarily local, and due to disordered functions, as proved by the fact known to all surgeons, that the disease, when promptly removed, may never recur.

(5) That benign ulcerations may become malignant, when it may be assumed the phagocytic action of the leucocytes has become subjugated by the micro-organism.

(6) That disease of any kind, whether malignant or inflammatory, never occurs in an individual whose functions and nervous system are in perfect health, and who has, as a consequence, perfect local and general resistance to all pathogenic micro-organisms—in whom phagocytosis is healthily and perfectly accomplished. (And here I may be allowed to say that Mr. Jonathan Hutchinson insisted that cancer is simply a modification of what occurred in chronic inflammation).

(7) That when, from continued irritation, depressing influences, or advancing age, the physiological character and vitality of the animal cells becomes lowered, cancer finds all the conditions necessary for its growth.

(8) That, in a word, cancerous disease is but one of the many proofs of over-pressure on the nervous system, which the artificial and vicious conditions of modern civilisation involve.

The case I bring before you is as follows:—

A. S., 21, single, tailoress, was admitted into the Women's Hospital on April 15, 1892. Patient was very pale and anaemic, and was in a very low condition. She complained of great weakness, pain in the lower part of the abdomen, and a very offensive vaginal discharge. She was fairly well up till eighteen months previous to admission, when she was confined. Since her confinement, she has gradually become very weak, and has never been free from abdominal pain. Her parents are both alive, &c. about
55 years. The mother is a very healthy woman; but the father, a powerful labouring man, has a tumour of the right side of the neck, which appears to be malignant. The mother states that her daughter fretted a great deal during the time she was pregnant, and has been very despondent ever since her confinement.

On examination, patient was found to be very thin; temperature 101°. The abdomen was sunken except in the midline just above the pubes, where the uterus was very prominent. She was very tender over the uterus, and in both ovarian regions. The vagina was roomy, and almost full of a very dirty and offensive discharge; the discharge was seen to come from the uterus. The cervix was very granular, and covered with small papillomatous growths. The finger could with ease be passed into the uterus. The endometrium, from the internal os almost to the fundus, was very rough, and bled freely on examination. The sound passed nearly six inches; the uterus was very free and movable, and the broad ligaments did not appear to be diseased; the right ovary was enlarged and very tender.

Patient had been under treatment for a considerable time in Albury, and the uterus had twice been curetted.

As there was little doubt that it was a case of malignant disease of the uterus, and as no other structures were apparently involved, it was decided to do hysterectomy. For ten days previous to the operation, the uterus was irrigated twice daily with corrosive sublimate solution 1 in 3000, and once daily two eight-grain iodoform suppositories were passed well inside the internal os. The fætor was considerably reduced, but the temperature did not decline, and three days before the operation it registered 104·4°.

Operation.—The uterus was much too large for removal by vagina, so I determined on the operation of total extirpation by the abdomino-vaginal method. Considering the mobility of the uterus, and the non-involvement of the broad ligaments and adjacent viscera and tissues, as far as could be verified by pelvic examination, there was reason to hope that the gravity of the operation would be justified by the great benefits which could be expected only from this method. All the preliminary precautions—thorough disinfection of the parts, &c.—having been attended to, the patient was placed in the lithotomy position, and the lower limbs separated by assistants. A Sims' speculum was passed, the cervix seized with a Vulsellum, and firmly packed with boracic
The mucous membrane was now divided along its anterior and posterior reflections on to the cervix, by means of a scissors, and pushed up to the extent of about one inch, taking care to keep close to the cervical tissue, and clear of the ureters. The patient was now returned to the supine position, and the abdomen opened by a free incision extending from the umbilicus to within a finger's breadth of the pubis. The uterus was seized with a strong Museux forceps, and drawn strongly out of the abdomen. The broad ligaments were now severed between two sets of ligatures, in a line extending through the infundibulo-pelvic ligament, with its ovarian vessels, and the round ligament towards the cervix. An incision was now made across the anterior peritoneal covering of the uterus, a short distance above the vesico-uterine fold, and the peritoneum, which was still luckily free of the disease, carefully detached and turned down. A posterior flap was treated similarly. The uterine arteries were now easily secured by picking them up on an aneurism needle, close to the cervix, and outside the reflected peritoneum. This latter procedure I have now adopted in six consecutive hysterectomies, with the utmost satisfaction to myself, there being no haemorrhage to dim the field of operation, and no damage to, or inclusion of, the ureters. The uterus and appendages were now removed, and the flaps of peritoneum (already referred to) brought together with fine interrupted silk sutures, so that the former site of the broad ligaments and uterus was represented by a line of peritoneal union extending across the pelvis, and marked by many sutures and ligatures. The peritoneal cavity was now carefully washed out, a glass drainage-tube inserted, and the abdominal wound closed with deep silver and superficial horsehair sutures.

I must here acknowledge my indebtedness to Dr. Martell, for the notes of after treatment, and also for the skill and attention with which he watched the progress of the case.

For a fortnight, the patient was treated in the special ward for abdominal operation cases. At first she was fed by the rectum, Brand's essence, yolk of egg, &c., being administered, with occasional doses of liq. quin. sed. Fluid was drawn from the tube at frequent intervals; the urine was drawn off by catheter. There was very little of note, the temperature ranged up to 101.8°; the pulse to 116. The discharge became a little offensive, and the cavity was irrigated with boric acid lotion. On March 12th she was removed to the general ward.
From the 7th till 12th the temperature was normal in the mornings, and 99·4° in the evenings.

After her removal to the general ward, the temperature again began to rise, and on May 15th it reached 105·2°. Vaginal examination revealed the fact that the tissues about the orifice of the urethra was the seat of a new malignant growth, which was very exuberant, and secreting pus freely. An attempt was made to remove this, but it proved only partially successful. The temperature still remained high, and the patient began to get weaker and present signs of general infection. Recovery was impossible, and patient was removed by her friends and taken back to New South Wales on June 24th. Although the second outbreak of the disease appeared to be very virulent, the cicatrix in the roof of the vagina remained perfectly free up till the time of her discharge—fifty-six days after the operation.

The practical conclusions to which I desire to invite attention are—(1) The necessity for an early diagnosis by the surgeon of all malignant developments; for if such were more frequently attained, and more promptly acted on, cancers would soon cease to be what they have long been termed by systematic writers—*the opprobrium of surgery*. (2) The benefits that would accrue to humanity from a pronounced general advocacy of those simple rules of life that would prevent the denaturalisation of our women and lead to prophylaxis. (3) The certainty of diminishing the prevalence, not only of cancer, but of every other special female complaint, by aiming at removal of the causes which among us so impede the sexual organs in the normal discharge of their allotted functions.

Thus will we accomplish in this department of our profession the ideal expressed in the proverb—*Sublata causa tollitur effectus*. Thus may we hope to stem the advancing tide of invalidism amongst the fairer half of our community, and show once more “how Divine a thing a woman may be made.”

Dr. Balls-Headley said they were much indebted to Dr. O’Sullivan for his paper, and for showing the specimens. The cases spoke for themselves—they were excellent, and the operations were exceedingly well done, and had been successful. As to the causation of cancer, he did not agree with Dr. O’Sullivan. He could not agree that it was a neurosis, that nervous excitability was a cause. Also, if the state of the blood
had anything to do with the development of cancer, you would expect frequently to meet with cancer in anaemic girls, but in such cases it practically never occurred. He agreed that patients found to be suffering from malignant disease had generally been in bad health previously; but the cancer almost always, if not always, developed in the site of a former irritation, an old placental attachment, or a granular os; but look at the crowds of such cases in which there was no malignancy. He had never yet seen a case of malignant disease of the cervix uteri where there had not previously been a granular face, and generally a laceration also. If due to the excitable condition of the parts, how was it that malignant growths were not more common on the penis? In men cancer was commonly found in the lip and tongue, and these men generally were smokers, and thus there was a source of irritation. What the importance of heredity was, it was difficult to say. He could not think that a depressed condition was of much importance, but he thought there was a specific development on an irritated surface. In regard to the infrequency of cancer amongst savages, in them the raw irritated surface was almost never seen. In such cases, great care should be taken to see that the diagnosis was correct. In New York he had seen a leading European surgeon remove a uterus, which was subsequently found to contain a small polypus dangling at the inner os. This had been the cause of all the symptoms; the patient died two days afterwards. As regards the fibroids, he thought the symptoms depended very much on the direction of growth; they also varied much in size, according to their condition, and this could be affected by treatment. In certain cases, great relief was obtained by dilating the cervix and curetting, drainage being thus favoured. In reference to the effect of removal of the ovaries in large oedematous growths, many years ago he operated on such a case, with Dr. Rowan's assistance. Now the tumour could scarcely be felt. Drainage did a great deal for such tumours, and in their treatment by electricity there was much passing of sounds, and thus probably drainage was favoured, and so relief was obtained.

Dr. Gardner asked how the diagnosis of sarcoma had been arrived at, for he felt sure that he would have mistaken the case for one of fibroid, with endometritis, owing to the protruding nodule high up on the posterior wall, and he concluded that a mistake could only be avoided in such a case.
by curetting, and having the débris examined by a competent pathologist. With regard to the method of operating, viz., the abdomino-vaginal, he was entirely in accord with the reader of the paper, for although he had seen a uterus three or four times that size removed by Péan by the vaginal method, it was performed for fibroid enlargement, and was done par morcellement, using specially constructed knives, and cutting away the fibroid till the uterus was reduced to a shell. The clinical distinction of Lawson Tait between soft and hard fibroids was in the majority of instances true. Removal of the ovaries and tubes in the case of the hard fibroids would lead to an arrest of growth, and sometimes to the almost complete disappearance of the growth. Of this, he instanced a case in his own practice, in which no tumour could be felt nine months after an operation for the removal of the ovaries and tubes, although at the time of operation the uterus reached the umbilicus. In regard to the cedematous variety, removal of ovaries and tubes was of no avail, as they continued to grow after the menopause, and the choice lay between palliative treatment and hysterectomy.

Dr. Adam, while congratulating Dr. O'Sullivan on the results of his cases, thought we were not yet in a position to discuss the causation of cancer. In regard to the malignant case, the most interesting point was the diagnosis. Dr. O'Sullivan said he diagnosed the case from the clinical picture. He thought we should not forget the value of curetting, followed by microscopic examination of removed tissue in such cases. Twelve months ago he had seen a case that looked very like malignant disease. He curetted, had the tissue examined; it was found not to be malignant, and the patient was now perfectly well.

Dr. Rowan did not agree with the positive statement, made on the authority of Lawson Tait, that removal of the uterine appendages was useless in soft cedematous myoma. He could show at least a dozen such cases, in which removal of the tubes and ovaries had been perfectly successful. He was doubtful whether removal of the uterine appendages was of any use after the menopause, but before the menopause the operation benefited all cases, and cured 75 per cent.

Mr. G. A. Syme would like to mention one point in connection with the technique of the operation. That day he had been reading the account of a discussion on hysterectomy. Baer, an American surgeon, recommended a free incision into the broad
ligaments, with ligature of the uterine arteries. No sutures were used. He recorded ten cases, all successful.

The President said that he was not prepared to admit any sharp distinction between the two classes of myomata described by Lawson Tait. Myomata varied greatly in the amount of fluid contained by them. Some were solid and tough throughout, others contained cyst-like spaces, which might be large or small, numerous or isolated. A large solid tumour with a few such spaces, even of great size, differed widely from a growth in which the fasciculi of involuntary muscle were separated by multitudinous small intervals. Some tumours contained islets of spongy consistence. Others again were soft and succulent throughout. But no definite division could be drawn between the hard and the soft varieties, the dry and the oedematous. Both the solitary and the multiple tumours might be hard or soft, tough or cystic. Comparatively tough myomata contained a large quantity of fluid. If a tough cystic myoma is cut in half, and one part kept in spirit, while the other is hung up in the air to dry, the latter will shrink to a small fraction of its former size. The two kinds of myoma, hard and soft, both display great variations in the character of their encapsulation, being in some cases very sharply defined and easily shelled out, while in other cases they are more intimately connected with the surrounding tissue. The soft myoma, that continued to grow when the uterine appendages were removed, was decidedly rare. Lawson Tait did not quote many cases, and did not speak too clearly about them. In some instances, however, the rate of growth and the clinical features were suggestive of sarcoma, though the structure was purely myomatous. In conclusion, he congratulated Dr. O'Sullivan on the splendid surgical results of the cases submitted, and spoke in high terms of the excellence of the specimens exhibited.

Dr. O'Sullivan, in reply, said he was much pleased that his paper had given rise to so animated and interesting a discussion. A practical expression of opinion from a body such as this must always lead to good results, by directing an intelligent curiosity to the etiology of class of diseases that are largely amenable to prophylaxis. He was sorry that Dr. Balls-Headley had misconstrued the gist of his remarks. Most leading systematic writers, amongst whom may be mentioned Herbert Snow, Walshe, Lobstein, and Sir James Paget, are agreed that depressing neurotic conditions—particularly mental distress—strongly pre-
dispose to cancer developments, and considering the directness of the testimony on this point, it surprised him to find that anybody should now question the soundness of the doctrine. The state of the blood had not, _per se_, anything to do with the development of malignancy. The anæmia referred to by Dr. Balls-Headley was an inevitable consequence of the depressed nutrition and defective innervation which naturally followed prolonged mental disquietude, and the many other depressing neurotic conditions already referred to as predisposing factors in the genesis of cancer. He did not say that cancer was in any way directly due to the excitability of a part, but rather that there was a special liability to cancer where the cell elements were prone to frequent modifications, and where these variations were under the direct and intimate control of the nervous system, as in the uterus. Here constant irritation and devitalising influences of any sort will work most evil. He quite agreed that the greatest care must be exercised in order to ensure a correct diagnosis. He would admit the difficulty, in rare instances, of drawing the line between malignancy and benignancy; but he asserted that in those exceptional cases of uterine cancer involving doubt, it would be infinitely better that the surgeon should—having taken all the necessary precautions, and availed himself of all the means at his disposal to arrive at an accurate decision—err, by performing the major operation promptly, rather than that a woman should, by indecision and bungling delay, be sacrificed to the inevitable general infection of malignancy. Mistaking malignant for non-malignant tumours is constantly occurring in every department of surgery, and we cannot expect to be free from it. He did not deal with the question of heredity of cancer, as it could not possibly be looked on as a _vera causa_. It relates entirely to the transmission, and has nothing to do with the first appearance of the disease. With regard to treatment of "fibroids" by dilating and curetting, he could not agree that any relief was obtained therefrom. He contended that such measures aggravated the evil by causing irritation, increased blood supply, and more rapid growth. Uterine tinkering, with astringents, electrical currents, curetting, and such minor palliative measures, could not be too strongly condemned. All these systems are annoying and expensive to a patient, far more dangerous than a radical operation, and never attended with permanent results. With regard to the statement of Dr. Rowan, that he found removal of
appendages perfectly successful in soft oedematous myoma, such was not the experience of the advanced school of gynaecologists of the present day. He (Dr. O'Sullivan) could not help thinking that Dr. Rowan mistook the hard nodular tumour, undergoing some degenerative change, as it frequently does, for the soft oedematous growth of pathology. Oedema is a frequent cause of such softening in those tumours, and they are often the seat of fatty, amyloid, myxomatous, cystic and other degenerations; but this condition of things must not be mistaken for the soft special variety of tumour referred to, which is only amenable to enucleation or hysterectomy. In reply to Dr. Adam, he would say that his patient had already been curetted twice by a leading surgeon in the country, her cervix was open, and the endometrium easily accessible to examination. He would conclude by saying, in reply to Professor Allen, that not only were the naked eye and microscopic appearances of the soft oedematous and hard multinodular tumours different, but their pathological and clinical characters were totally distinct.

Professor Allen showed a specimen of leontiasis.

Mr. G. A. Syme showed for Dr. Ruddle, of Daylesford, the following specimens:—(a) Fibro-cystic tumour removed from the right anterior triangle of the neck of a woman, aged 49. The tumour had been present five years. About three years ago something burst inside her throat, and she spat up a quantity of thick, viscid, slightly blood-stained fluid. The tumour at the same time disappeared. In about a month a swelling re-appeared in the neck, and has gradually increased, but shifted lower down. It caused dyspnœa, and patient could not sleep lying down. At the operation, the tumour was found to be adherent to the carotid sheath, and extended down to the transverse processes of the vertebrae. Alarming venous haemorrhage followed removal, which was checked by plugging the wound, and applying pressure and hare-lip pins. The haemorrhage was found to come from a vein which passed through the tumour. The patient made a good recovery with no recurrence. (b) A gall-stone impacted in the common bile duct, removed post-mortem from a patient who had died from cirrhosis of the liver. There was no history of intemperance, and it seems possible that the irritation of the retained bile caused the cirrhosis. (c) Tuberculosis of larynx, advanced—the vocal cords being destroyed, while the lungs were only slightly affected with miliary tubercles, but no coarse lesions.
British Medical Association.

VICTORIAN BRANCH.
ORDINARY MONTHLY MEETING.
Wednesday, November 16, 1892.

The President (Dr. J. W. Springthorpe) in the chair, and a large attendance of members.

The minutes of the previous meeting (19th October, 1892) were read and confirmed.

Correspondence was read:—From Mr. C. R. Blackett, acknowledging the honour conferred upon him by his election as an Honorary Member of the Branch; from Dr. D. A. Gresswell, expressing his gratification on the receipt of the motion of the Branch, expressing their appreciation at the manner in which the outbreak of Small-pox ex R.M.S.S. Oroya had been stamped out; from Dr. Oliver Wendell Holmes, as follows:—

296 Beacon Street, Boston,
September 10, 1892.
To the Victorian Branch of the British Medical Association.

The Greeting which you send me is one of the highest honours I have ever received. I accept and most gratefully acknowledge it, only wishing that I felt more worthy of being so signally distinguished. With my best wishes for the continued prosperity of your noble Association,

I am,

Very respectfully and cordially yours,

OLIVER WENDELL HOLMES.

AUGUSTUS LEO KENNY, M.B., B.S.,
Honorary Secretary.

Dr. Neild announced that he had received a similar letter.

The President announced that, at the last meeting of the Council, the following gentlemen had been elected Members of the Branch:—Dr. Thomas Gray, Board of Public Health; Dr. Andrew Robertson Grant, Nicholson Street, North Carlton; Dr. Clarence Godfrey, Yarra Bend Lunatic Asylum; Dr. Denis Doolan, Heidelberg; Dr. Frederick Hamilton-Kenny, Armadale.

The total Membership of the Branch was now 224.

Dr. Mullen moved, as per notice duly given:—"That in the opinion of this Branch, where a Coroner or Magistrate has reason to believe that a medical practitioner, chemist, nurse, or similar person is implicated in the death of anyone, it is inadvisable that
DEC. 15, 1892 Work in Klein's Bacteriological Laboratory. 643

the post-mortem examination should be made by a medical practi-
tioner in actual practice in the same district." He thought the
motion would explain itself, and as it was only advisory, there
would be no difficulty in large centres. He might state that Mr.
Candler always followed the practice advised in this motion.

Dr. Hamilton seconded the motion.

Dr. Springthorpe asked what was meant by the term "similar
person," and would it not be better if the motion were also to
apply to the metropolis, to say "the same suburb or district?"

Dr. Neild thought that the motion, as stating a principle, had
much to commend it, and as a practice, had been carried out.
Sometimes circumstances arose such that certain knowledge
possessed by a gentleman residing in the same district would
render his selection desirable, but in that case another gentle-
man should be appointed to act with him. He was of opinion
that such matters should be left to the Coroners; that such a
motion should not be passed, and that if passed, it would not be
judicious to send it to the Minister.

Dr. Mullen suggested the insertion of the word "solely"
before "made."

Dr. Neild thought that that would not remove the dictatorial
character of the motion.

Dr. Rowan objected to the whole motion, lock, stock, and barrel;
it was highly unnecessary, and was a purely covert imputation
against members of our own profession, that they were not only
unable to perform post-mortem work, but that through bias they
were unable to give just evidence, and that they had no regard for
the value of an oath. As a Society, they had no right to cast
any such imputation against the honour or integrity of members
of the medical profession.

Dr. Mullen, after what Dr. Rowan had said, desired to with-
draw the motion; with the consent of the seconder, Dr. Hamilton,
this was done.

The following paper was then read:—

AN ACCOUNT OF SOME WORK IN PROFESSOR
KLEIN'S BACTERIOLOGICAL LABORATORY.


Mr. President and Gentlemen,—Much of the interest which
the science of Bacteriology excites is doubtless due to the expecta-
tion that, by its aid, man will someday secure immunity from
infectious disease, and the practical importance of the subject depends on this difficult question:—How may artificial immunity be obtained? Distinct progress has lately been made in this direction, and valuable results have been acquired in investigations as to means of destroying susceptibility to such fatal diseases as diphtheria and tetanus. The more the bacteriologist learns of the nature and life history of pathogenic microbes, and of the surroundings which make life possible or impossible to them, the nearer will he approach to success in his endeavours, and the greater will be his chance of making valuable and important discoveries. By observing what conditions of atmosphere, temperature, nourishment, are favourable, and what conditions are unfavourable, to hostile bacilli, and in what conditions of environment they make easy or difficult victims of their prey, the investigator may possibly arrive at a knowledge of those marvellous properties of the blood, the presence or absence of which determines susceptibility or its opposite to any disease. Further researches into the alkaloidal substances produced by microbes, and into the chemical differences which distinguish the blood of susceptible from that of insusceptible animals, will perhaps successfully elucidate the mystery. Indeed, it seems likely that the foundation having been laid by the bacteriologist, much of the remaining work will belong to the chemist, or at least, that the two must work hand in hand.

Professor Klein, in whose laboratory, at the College of State Medicine, London, I was working last year, holds the view that the white cells of the blood do not devour bacilli, that is, do not possess the phagocytic action ascribed to them by Metschnikoff; and it was at the outset of some experiments on the subject of this phagocyte theory in which I was assisting Professor Klein, that we found that the normal immunity of the rat against anthrax is destroyed by the use of chloroform as an anaesthetic at the time of inoculation. We then proceeded to carry out some experiments on the influence of chloroform on immunity generally, which were recently reported in a German journal, namely, the Centralblatt für Bacteriologie, published in Cassel.

The first series of experiments relates to rats and anthrax. The material of inoculation was either a portion of the spleen of a guinea pig which had died of anthrax, the piece of tissue being inserted under the skin of the rat's thigh, and the wound closed; or some anthrax spores, obtained from a fresh culture on agar
agar, and injected beneath the skin in the same region. A rat was inoculated while under chloroform, or, to be more accurate, a mixture of chloroform and ether; it died on the fourth day. The experiment was repeated twice, and death in each case occurred on the fourth day. In the first case, there were found anthrax bacilli in the spleen and in the heart's blood; and, moreover, cultures made from the spleen and from the heart's blood, as well as from the seat of inoculation, were found to consist of anthrax. Furthermore, a guinea pig inoculated with a culture from this rat, died of anthrax in two days. I will here mention, that a mixture of chloroform and ether was the anaesthetic we habitually employed; it is alluded to shortly in this paper as chloroform.

It must not be forgotten that inoculation with such a virus as anthrax cannot be considered fatal, merely because the creature inoculated has died. Death may have resulted independently or from septicæmia. Further evidence is obtained if a culture from the blood or an organ of the dead animal prove to be of the same bacillus as that which was injected. But complete proof is only considered to be obtained, if inoculation of this culture produce the same disease in another animal, as shown by further microscopical examination and cultures made from its tissues and blood. To go through all these steps in an extended investigation, such as the present, would be extremely laborious. Sometimes we obtained complete proof as above described, sometimes we were satisfied with less complete proof.

In the second rat the spleen was full of anthrax, and cultures of the spleen and of the heart's blood showed copious anthrax. Two mice inoculated with culture of the spleen died in thirty-six hours, and were swarming with anthrax.

In the third rat, anthrax was found in the heart's blood and spleen, and cultures gave corroborative evidence of the presence of the microbes in those organs. Moreover, two mice inoculated with the blood of this rat died in seventeen hours. Although but a few anthrax bacilli were found in their blood, numerous colonies of anthrax were found in cultures from the heart's blood and spleen. Furthermore, a guinea pig inoculated with a culture from this rat, died in two days of anthrax. Now, it is well known that the rat ordinarily possesses immunity against anthrax. Simultaneously with the above experiments, a rat was inoculated with the same spore cultures as that above used, without the administration of chloroform, and, as was expected, it survived.
Thus, the evidence at first starting is tolerably strong that chloroform, administered at the time of inoculation, breaks down the principle of opposition with which the rat is ordinarily endowed against the anthrax bacillus. The occurrence of death in each case on the fourth day, is the first indication of the more or less uniform results which are observable in these experiments; which uniformity seems to me to point strongly to a numerical principle at work, and hence to suggest a chemical rather than a physiological resistance to the invading bacilli. All chemical substances have their combining proportions. Combine a definite quantity of oxygen with a certain weight of burning phosphorus, and you get a definite weight of an oxide of phosphorus. Speaking generally, you can predict the result, according to the quantities you employ, in all chemical processes.

Of course the animal experimented upon is not a mere chemical factor. Its resistance is physiological and complicated, but results will, with much greater likelihood, be uniform and proportionate, if the agent acting on the animal be inanimate than if it be animate. The whole science of medicine is founded on the general principle (subject to modifying circumstances), of "result according to dose." Physiological processes are probably ultimately chemical, and therefore it may more correctly convey my meaning, if I say that uniformity of result seems to point more to chemical than to protoplasmic action. It seems to indicate, not an opposition varying according to circumstances, complicated, semi-intelligent on the part of the white cells of the blood, but rather a resistance governed by some definite law or laws—in other words, to the serum rather than the leucocytes, as the organ of resistance.

The next experiment was chloroforming a rat half an hour after inoculation with splenic blood of a guinea pig dead of anthrax. This rat died on the fifth day. Anthrax bacilli were found in the heart's blood and in the spleen, and cultures made from the heart's blood and spleen displayed the anthrax bacillus.

The next rat was injected with spores, and, one hour later, chloroform was given. This animal died about the seventh day, and anthrax bacilli were visible in the spleen, heart's blood and liver; also, cultures made from those organs showed the typical anthrax characteristics. Again, complete proof was obtained, for a guinea pig, inoculated with one of these cultures, died in two days of anthrax.
The next rat was injected with spores, and, two hours later, chloroform was administered. Death occurred on the fourteenth day, when anthrax was found in the spleen, and in the cultures from the spleen and heart's blood.

The last rat of the series had spores injected, and, four hours later, chloroform was administered. Death took place on the twenty-fourth day, when anthrax was found in the spleen.

Thus, every one of the seven rats, whose inoculation was either accompanied or followed within four hours by the administration of chloroform, died, with unmistakable signs of its death being due to the bacillus; for microscopical examination showed specific anthrax microbes to be present in the blood, or in some internal organ, and whenever the poisonous quality of either the blood, or the cultures made from the blood or organs of the creature supposed to have died of anthrax, was tested on other animals, death, due to anthrax, was the result.

An effort was now made to test the effect of chloroform previous to inoculation, and for this purpose a rat was chloroformed, and, half an hour later, was inoculated with the blood of an animal dead of anthrax. Death occurred on the seventh day, and the microbe was found present in the splenic blood, and in cultures from both heart's blood and spleen.

The next rat was anaesthetised, and spores injected one hour later. This animal was killed on the sixth day, and no anthrax bacilli were found, either at the seat of inoculation or in the spleen, nor were we successful in making anthrax cultures.

In the next case, a rat was chloroformed, and, two hours later, spores were injected. The virulence of these spores had been satisfactorily tested on a guinea pig. Death had not occurred by the ninth day, and then chloroform was given, and spores were injected for the second time. Six days later the animal was killed, and microscopical examination showed a few degenerate bacilli in the splenic blood, while no successful culture of anthrax could be made. Here, then, is a point of interest. The first unsuccessful inoculation strengthened the natural immunity, so that the second inoculation, which was accompanied by chloroform, had no effect.

In the last case of the series a rat was chloroformed, and four hours later, injected with spores. Death had not occurred on the ninth day. Chloroform was then given and spores were again injected. Death occurred on the eighth day after the second inoculation, anthrax being found in the spleen and liver; and,
moreover, cultures which were made from the spleen and heart's blood proved to consist of typical anthrax. Thus, it would appear that the former inoculation had little effect in diminishing the vulnerability of the rat to anthrax under chloroform. Instead of death occurring on the fourth day, it occurred on the eighth.

The results obtained from the foregoing experiments may be stated thus:—Chloroform breaks down immunity against anthrax in rats, if it accompany inoculation, or if it follow inoculation within four hours, or if it immediately precede inoculation, but not otherwise; and, while rats are naturally insusceptible to anthrax, each of a series of eight, chloroformed under certain conditions of time, succumbed, as the effect of inoculation to anthrax.

Our observations made as regards the frog, which, like the rat, possesses natural immunity against anthrax, were less complete; and an attempt made later to repeat these experiments met with no success, for several of these animals, inoculated with anthrax bacilli under chloroform, died, one within three and one within about fifteen hours, this rapid death being due apparently to an extremely minute septicæmic bacillus, and the presence of this septicæmia of course confused and invalidated the results.

In the course of these experiments with the rat and the frog, I made scores of fresh and stained preparations for microscopical examination, and, although the straight, rod-like shape, square cut ends and jointed appearance of the anthrax bacillus are so characteristic, yet, under the direction of Professor Klein, I never failed to make confirmatory cultures on agar agar, or gelatine, of both spleen and heart's blood, and sometimes of the tissues at the seat of inoculation. Indeed, it is obvious that the bacillus may easily escape observation, if present in small numbers on a slide preparation, but which, on a favourable medium, will multiply and give rise to an unmistakable colony. The method of staining employed was to allow the cover-glass with the drop of blood to dry naturally, that is, to avoid any heating, and then to stain with watery solution of methyl blue, and allow natural drying to take place. The red corpuscles appeared normal, and among the scores and even hundreds of preparations made, although the field was very thick with bacilli, in no case was one visible within a white cell. Specimens made from the dorsal lymph sac of the frog dead of anthrax, failed to show any leucocytes containing anthrax bacilli. Thus, the question of the phagocytic action of the
white cells appears to me to be a very difficult one to sub- 
stantiate. These preparations contain thousands of white cells, 
and thousands of anthrax bacilli. Surely, if the phagocyte theory 
were a true one, some sign would have been visible supporting it. 
Is it not more likely that the pathogenic microbes, in certain 
cases, find refuge from the serum in the white cells, and that such 
few bacilli as have chanced to become incorporated in white cells 
are protected from the destructive action of the serum? It is well 
known that the tubercle bacillus cannot thrive in the blood, but 
multiplies in the giant cells. Similarly, the leprosy bacillus exists 
and multiplies in certain large cells. Thus, reasoning by analogy, 
protoplasm is more favourable than serum to pathogenic bacilli.

In a few preparations of the blood of the frog dead of 
septicaemia, as above referred to, one or two leucocytes crowded 
with minute bacilli (perhaps a dozen in each) are visible, but the 
bacilli were most actively motile, and could easily have enmeshed 
themselves in the white cells. I can imagine phagocytic action in 
exceptionally favourable circumstances, but can hardly believe 
that slowly acting leucocytes could possibly cope with the 
thousands of bacilli which form an ordinary dose for experimental 
inoculation, and rapidly enter the circulation.

It might be objected that, in the particular experiments above 
described, the effect of the chloroform was to paralyse or benumb 
the leucocytes. To settle this point, a frog was placed under 
chloroform, and then a drop of lymph from the dorsal lymph 
sac placed in a cover-glass cell upon a hot stage. The movements 
were found to be active and perfectly normal. In several cases, 
the movement of the protoplasm was carefully watched and 
drawings made. The amoeba-like movement was in each case 
found to be unremitting, so that there was no reason to think 
chloroform administration paralyses the leucocytes.

How does chloroform act in destroying the immunity of rats 
against anthrax? It probably has some chemical action on the 
serum, forming with the serum a new substance antagonistic to 
that element of the blood which normally protects the rat from 
anthrax. Or, it may be, the new substance aids the action of the 
invading bacillus by increasing its virulence. But the effect of 
the chloroform is evanescent, for, when given one or two hours 
before inoculation, the rat's immunity against anthrax remains 
unaltered, so that, if a new substance be formed, it is either 
unstable or rapidly eliminated. It seems likely from the
experiments, that if the anaesthetic be given seven or eight hours after inoculation, the normal protective action of the serum would be by that time satisfactorily accomplished, but, administered at the proper time, chloroform renders the microbes irresistible.

Anthrax is perhaps the disease of which the bacteriologist knows most. Its microbe has received an enormous amount of attention, and there is less uncertainty and controversy surrounding it than is the case with most other species of bacteria. But no astonishment need be felt that, so far as the experiments went, the influence of chloroform is limited to one pathogenic microbe; for each bacillus is distinguished by special characteristics, naked eye (when growing in a culture), microscopical, and chemical. Bacilli are susceptible, according to their different species, to the influence of minute changes of temperature, to light, to pabulum and to obnoxious substances, such as carbolic acid, perchloride of mercury, and other antiseptics. Some require oxygen, others seem to require its exclusion; some, as the bacillus prodigiosus and bacillus pyocyaneus, produce subtle pigmentary changes; some cause odours of various kinds.

The world of microbes is beyond doubt, viewed even with the glimpse that has been obtained during the past score or so of years, subject to the highest degree of differentiation. Therefore, it is not astonishing that the influence of chloroform on immunity should, so far as these experiments are concerned, be limited to one particular microbe. It has been shown that in certain cases a raised body temperature, or fatigue, destroy immunity to anthrax. Moreover, previous inoculation with bacillus pyocyaneus or with staphylococcus aureus, has been found to bestow immunity to anthrax. In any circumstances, whatever actual explanation of immunity be offered and accepted, it seems to me it must be of a chemical nature. The recent researches of Behring and Kitisato, and of Ogata and Tasuhara, point this way. The former investigator found that, while mice are susceptible to tetanus, immunity is obtained if the serum of rabbits' blood be injected into the mouse, the rabbit being insusceptible. And the latter investigators found that, while mice are susceptible to anthrax, the serum of the blood of the frog or dog (both of which possess immunity from anthrax) being injected into the mouse, gives immunity. They have also shown that, although the guinea pig is naturally susceptible to diphtheria, serum of rats' blood (the rat possessing immunity from diphtheria) being
injected into the guinea pig, destroys the susceptibility. A point of considerable interest in these chloroform experiments is, that there is visible a relationship between the dose of "anthracine," presumably manufactured by the anthrax bacillus, and the effect produced by it. In each of the three cases in which the anthrax bacilli could work, aided from the first by the presence of chloroform, death occurred on the fourth day. When, however, they were exposed for half an hour to the unrestrained antagonistic elements of the blood, they took another day to produce the "anthracine" required, that is, death took place on the fifth day. When their ally (chloroform) did not appear till one hour after inoculation, they took seven or eight days to produce the fatal dose. When they received no aid till two hours had elapsed after inoculation, they needed fourteen days for their work, and when four hours elapsed before chloroform was given, they took twenty-three days to produce a fatal dose of virus.

"Anthracine" was apparently produced at a rate showing an inverse ratio to the period of unrestrained blood antagonism to which the anthrax microbes were exposed. This almost geometrical rate of production is an additional argument against the phagocyte police, whose existence is maintained by Metschnikoff. Result proportional to dose must be more likely to occur when the factors involved are of simple nature, than would be the case were these factors complex, as when countless protoplastic bodies, with slow ameboid movements, were pursuing and digesting a numerous foe. In connection with this point, it is worth mentioning that the ptomaines of Selmi have been shown to act according to dose.

As was shown by our later experiments, the administration of chloroform had no effect in making the rat susceptible to malignant cedema, pneumonia, human diphtheria, or grouse disease (Klein). Nor did it affect the immunity against fowl enteritis possessed by the pigeon, the immunity against grouse disease possessed by the rabbit, nor distinctly affect the susceptibility of mice to human diphtheria.

Surely, limitation to anthrax and rats of chloroform influence in this matter of susceptibility, is a powerful argument against the phagocyte theory. Is it credible that the chloroform inhalation would cause just sufficient torpidity in the white cells of the rat's blood to make them inefficient in the presence of one particular hostile bacillus, namely, that of anthrax, and yet leave them as active as ever against so many other pathogenic microbes?
The nature and behaviour in various circumstances of bacilli are so important pathologically, that any new and undoubted fact, such as this influence of chloroform in breaking down the rat's immunity from anthrax, possesses interest. It is well for suffering humanity that chloroform, so far as we know, has no untoward influence in increasing man's susceptibility to septicæmic or other infectious processes.

Dr. Springthorpe said they were all pleased to hear such an interesting paper. He wished to know if any experiments had been made as to the effect of chloroform upon anthrax spores and bacilli in cultures, &c. He had come to regard the phagocytosis theory as overdone, and was of opinion that the blood serum was more important in defence.

Dr. Gresswell added his compliments to those expressed by the President. He thought a great deal too much had been made of the phagocytosis theory, and instanced the use of quinine, arsenic, and the use of urine as a specific in ague at certain stages. We know now that chloroform had a distinct action on the red blood-cells, and he thought this might have been regarded in the experiments narrated by Dr. Coxwell.

Dr. Rowan noted during the reading of the paper, that in nearly every instance in which the rats were chloroformed, spores were visible in various organs, but that in the one particular instance, in which ether was stated to have been administered, none were found. This prompted him to ask the question, if any rat had been examined after the pure administration of chloroform?

Dr. Coxwell had not noted the effect of chloroform on the bacilli or spores of anthrax, and thought that it would be very difficult in such an experiment, to ensure freedom of the tubes from impregnation from the atmosphere. He did not see any effect on the red corpuscles during the experiments. As a rule, chloroform and ether were employed in conjunction in all the cases, but was not tolerated in some; if he had read ether, he should be understood to mean both.

NOTES ON SOME ABDOMINAL CASES.

By R. A. Stirling, M.B.

Surgeon to the Melbourne Hospital.

As these patients were under the care of my colleague, Dr. Springthorpe, before passing into my hands, I have first
of all to thank him for the correct working diagnosis with which he furnished me at the consultations.

Abdominal sections are performed very frequently at the Hospital, in the general theatre, for such emergencies as intestinal obstruction, suppurative appendicitis, as well as for the more chronic cases such as are here described. No special precautions, other than the usual aseptic ones requisite in any operation, major or minor, were taken in my cases—nor as far as I know by any of the surgeons. The instruments are soaked in a five per cent. solution of carbolic acid, the hands are thoroughly cleansed, but there is an absence of that antiseptic elaboration, such as is described by gynæcological authors, and which I have seen practised by Czerney at Heidelberg and elsewhere. Notwithstanding this, our results have been remarkably good, much better I believe than in the old Listerian days, where besides a special theatre, special nurses and instruments, it was considered indispensable for the carbolic spray to play for hours into the atmosphere of the room, and sometimes into the peritoneal cavity of the patient.

Case I.
Multilocular Ovarian Cyst—Removal—Recovery.

Admitted October 11, 1892. The patient, a very thin weakly-looking old woman, owing to 56 years, but looking at least 70 (I was assured by her brother-in-law that was her real age), noticed about two years ago a general enlargement of her abdomen, especially marked on the right side, in the iliac region. Previously she had enjoyed fair health, but within the last few months the rapid growth of the tumour had caused her much pain and inconvenience, and she was unable to continue working as a domestic. She is a widow, and multiparous. Menstruation ceased many years ago; she cannot give more precise information. On palpation, the walls of the tumour are tense, and it seems semi-solid. The shape of the enlargement and percussion show its real nature. There were no indications of other organic disease.

October 20, 1892.—I take the description of the operation from the notes of Dr. Sawrey, the House Surgeon. The anaesthetic was chloroform. An incision was made through the abdominal parietes below the umbilicus for three inches, and the wound was afterwards enlarged by scissors upwards and downwards. The tumour was thus exposed to view as a huge rounded mass,
not adherent anteriorly. A large aspirating trocar pushed into
the area presenting failed to draw fluid, so after sponge packing
of the peritoneal cavity, a large ordinary trocar was passed into
the left lateral part, where the contents seemed more fluid. After
emptying a quantity of viscous syrropy fluid, the tumour was easily
shelled out of its bed, some adhesions of the small intestine to its
upper part having been detached. The pedicle, a very broad one,
was secured by the chain ligature with strong silk. Some of the
fluid having escaped into the abdomen, irrigation was carefully
used, and the peritoneum well dried with sponges. The wound
was closed in the usual way, Reverdin's needles being used for
suturing. Keith's drainage was placed in the lower angle of the
wound, but removed next day.

I will not weary you with the details of the after treatment.
The temperature never rose above 100°. Neither vomiting, nor
tympanites, nor any untoward symptom delayed convalescence, and
she was discharged quite well in three weeks.

Dr. Mollison has supplied the following notes of the pathological
condition:—This tumour represents the ovary, and is a good example
of the colloid cystic tumour, or adeno-cystoma. It is surrounded
by a fibrous capsule, and is composed of an immense number of
cysts, varying greatly in size, and supported by a fibrous network
or by spongy tissue, which is in reality composed of a multitude of
minute, almost microscopic, cysts. The larger cysts generally
contain a somewhat watery fluid, which may be discoloured in
various degrees by blood or blood pigment. The smaller cysts are
filled with thick gelatinous material. They are lined by a layer of
columnar or goblet epithelial cells secreting the mucinous matter.

**Case II.**

Mrs. M., aged 29, admitted to Ward 22 on October 11, 1892.
She was under the care of Dr. Springthorpe for abortion from
August 30 to September 8, 1892. When the uterus had expelled
a two months' foetus, she was discharged at her own request.
Again admitted on September 23, complaining of severe abdominal
pain, especially to left of umbilicus, with vomiting. A hard
rounded swelling was then detected below and to left of umbilicus,
dull on percussion, "with a cystic feel," the size of a large orange.
The tumour itself is not very tender, but pressure around its
margins was extremely painful.

October 13.—Operation under chloroform. The tumour, dark-
coloured, tense, and much resembling a displaced kidney, was
firmly adherent, to intestine especially, in every direction but on
its anterior border. On aspiration, a quantity of dark fluid was
withdrawn. After incising its thick wall, solid material, like
broken down blood-clot, was removed. The intestinal adhesions
gave some trouble, and in one place the peritoneal coat was
unavoidably torn. The tumour was attached to the uterus by a
long thin pedicle, which had twisted on itself, and which was
ligatured with silk and cut off. Most of the omentum, being
intimately adherent to the swelling, was ligatured and removed.
Finally, irrigation with hot boracic lotion, Keith's tube inserted,
and the abdomen closed. Convalescence was uninterrupted.

The following notes of the pathological condition are supplied
by Dr. Mollison:—The specimen consists of the left uterine
appendage, showing large tortuous veins in the broad ligament,
with several haemorrhages into the substance of the ligament.
In this way several cysts have been formed, containing blood
more or less altered. In the largest cyst, a thin layer of organised
blood-clot can be seen to line its interior.

Case III.

Large Hydatid of the Liver—Abdominal Section—Recovery.

E. Mc.C., 23, domestic, admitted September 5th, 1892. For
the last two years has suffered from pain in the hepatic region,
of a gnawing character. Nine months since, a lump appeared
under the ribs in the right side, but it has not seemed to her to
get larger. The pain grows worse daily, and she complains of
vomiting, especially after eating heartily. She looks thin and
distressed, but is otherwise in fair general health. The tense
elastic feeling of a hydatid pressing the liver against the ribs, and
extending downwards as far as the level of the umbilicus, seemed
unmistakable. Hydatid fremitus, which is, I think, only found
when a large mother-cyst full of daughter-cysts is in close contact
with the abdominal wall, was absent here.

September 8.—Operation under chloroform. An incision two
inches in length was made over the most prominent part of the
tumour, the parietes being very vascular. On opening the peri-
toneal cavity, the cyst was found to be well under the concave
surface of the liver, and difficult of access. It was extremely
large. The incision was therefore enlarged one inch and a half
downwards, the peritoneal cavity packed with sponges, and the
cyst-wall opened with the scalpel, the fluid escaping into a large
sponge placed beneath it. There was free bleeding at first, controlled by rapidly suturing the cut edges of the ecto-cyst to the parietes. Dozens of daughter-cysts of varying sizes escaped, and the cavity was thoroughly irrigated. A large drain-tube was inserted, and the wound dressed with iodoform gauze. The operation was complicated by the bad manner in which the patient took the anesthetic, and being a prolonged one, was followed by severe shock. For several days her condition was critical, chiefly on account of distressing vomiting, of a greenish colour. She complained of severe abdominal pain around the wound, but no signs of general peritonitis nor meteorism supervened. Her pulse rose to 140; tongue dry, red, and irritable. She was tormented with thirst and headache. The temperature remained low. She was fed entirely by rectum, everything by mouth being rejected.

September 12.—Condition improved; vomiting ceased.

October 28.—Discharge has ceased; sent to Convalescent Home.

CASE IV.

Tubercular Peritonitis—Sacculated Exudation.

Sent to me by Dr. Springthorpe on November 8th, 1892, from Ward 12, where she had been under observation for a week; prior to this, a medical out-patient for several weeks. When first admitted, she complained of cough, dyspnœa, and slight expectoration. On examination, there is a tumour in the abdomen, extending from the epigastrium to the umbilicus. It is dull, hard, and firm. The whole of the right side of the chest was waterlogged, and two pints of clear fluid had been drawn off by Dr. Springthorpe—an operation which relieved her chest symptoms, but her general state was extremely low; the stomach rejecting all nutriment.

November 5.—Twenty-eight ounces of clear dark fluid removed by aspirator from abdominal tumour.

November 8.—After consultation, laparotomy decided on. The tumour was adherent to the parietes. During the manipulation of the cyst after tapping, to see if it were not possible to remove it en masse, the adhesions on the right side gave way, and the peritoneal cavity was opened up. From it escaped a quantity of ascitic fluid, but I could find no traces of tubercle which, if present at all, is always found on the omentum. There can, however, be very little doubt but that this patient
is the subject of tubercular peritonitis. I base this opinion on
the co-existence of pleurisy, the two being very commonly
associated, the presence of slight ascites, the fever and terribly
depressed state of the system, and finally, the pronounced gastric
symptoms. These sacculated exudations are "the most common
and most puzzling of the abdominal tumours produced by tuber-
culous disease." They are met with in the upper, middle, and
lower abdominal regions.

Some months ago I operated on a youth with tubercular
peritonitis, in whom there was an omental tumour which formed
an elongated rolled up mass attached to the transverse colon
lying as a transverse ridge across the upper part of the abdomen.
Ascites was very marked, and the whole peritoneum was studded
by tubercles. There was moderate fever. The cavity was simply
opened and drained for several weeks. He left the hospital for
Castlemaine much improved, but I have heard from Dr. Reid, of
that town, that he recently died of galloping consumption.

In conclusion, I would mention a recent case of hydrocele,
upon which I performed the radical cure by antiseptic incision.
The tunica vaginalis was covered with tubercles, and the fluid
withdrawn was quite purulent. The testis and epididymis were
unaffected. The man, aged 35, had a temperature of 100° prior
to the operation, and a daily rise for several weeks subsequently,
but finally recovered perfectly. There were no indications of
pulmonary trouble.

Dr. NIHILL thought the recording of such cases was very
useful to others. The more one saw of abdominal cases, the
more the opinion became confirmed that diagnosis was most
difficult.

Dr. O'SULLIVAN remarked that there was nothing controversial
in the paper, and he had but to congratulate Dr. Stirling on the
results achieved. All ovarian tumours were primarily multi-
locular as a rule. Asepsis, rather than antisepsis, was modern
gynaecological procedure; the presence of pus rendered antisepsis
more judicious. Varicocele of the broad ligament complicated all
ovarian tumours, sometimes each single vein being the size of the
thumb. Results, such as Dr. Stirling's, were very satisfactory in
general hospitals.

Mr. SYME would have liked more information regarding the
second case, which was very puzzling, both before and at the
operation. At the time of the operation, it certainly appeared to be a par-ovarian cyst, with a twisted pedicle. The question of extra-uterine foetation was also considered at the time, but of course negatived by the operation. He thought there was too great a tendency not to attempt diagnosis in abdominal cases, but "to cut down and see." There was also a general opinion that laparotomy was simple and easy, and not likely to be fatal. Properly done, the risk was certainly not very great, but he deprecated the growing tendency to recklessly open the abdomen without using the full means at hand for diagnosis. Incisions should be confirmatory rather than exploratory.

Dr. ROWAN was pleased to find such cases successful in a general hospital. He had recent experience inclining him to take the views expressed by Mr. Syme. Fourteen days ago, he saw a patient at the Women's Hospital with a correct history of extra-uterine pregnancy. At consultation there was a slight difference of opinion, but laparotomy was deemed advisable. By vaginal and external examination, there was felt a tumour about the size, form, and consistence of the uterus; in Douglas' Pouch there was a large globular swelling, soft, boggy, feeling in every way like extra-uterine pregnancy. No sound was passed in this case, because he had met with bad results from the passing of a sound in similar cases. On opening the abdomen, he found a soft oedematous myoma in Douglas' Pouch, and what had been taken for the uterus, was found to be a prolongation of the myoma forwards. It was decided, with Dr. Meyer, to take away the appendages, and allow the myoma to shrivel up. The patient was doing well. It was always advisable to exhaust every means of diagnosis.

Dr. SPRINGTHORPE had had some of these cases under him as physician. The old lady was sent to the hospital for malignant disease on account of the nodular feel of the tumour. There was no particular pain, nor cachexia. Careful examination decided surgical interference. The second case had aborted in the hospital, and made so good a recovery that she was not examined; on her return, there was a well-defined tumour. The third case was one of tubercular pleurisy, with consolidation of the lung, but the main trouble was between the umbilicus and epigastrium. With a hypodermic needle, clear fluid was drawn off from a swelling in this situation. The patient consented with difficulty to the operation. He would mention two other cases in which
great trouble had been experienced in making a diagnosis. One, from Coburg, gave a doubtful history of miscarriage; it was a question whether there was perityphlitis, a tumour, or pus. There was an infiltrated area at the umbilicus, from which pus escaped, with a faecal odour; no pus passed by the bowel; a probe passed into the left iliac fossa; the case is now recovering. Another was apparently a case of perityphlitis; at consultation it was decided to do nothing; the case had left the hospital with the infiltration almost gone.

Dr. STIRLING regretted the scantness of his notes. The second case corresponded in every way with a figure in Sutton's book, of hydro-salpinx, with twisted pedicle. One did not get a series of successful results very frequently, and as the Melbourne Hospital had such an unenviable reputation in these cases, he thought it well to make this report.

The case of Haskings v. Nicholson, tried last month in the Supreme Court, presents several points of interest to the medical profession. Let us briefly state the case. Dr. Nicholson, of Benalla, an experienced and respected practitioner, who has been in the district for over twenty years, attended the late W. H. Haskings. At his first visit, he diagnosed the case as influenza, and ordered one grain of morphia and twenty grains of antipyrin. The patient died about four hours after taking this prescription. The father of Haskings sued Dr. Nicholson for £5000, for “having improperly, carelessly, and unskilfully caused the death” of his son, by giving the above prescription, “not having properly examined the deceased before prescribing it,” and “the prescription containing an excessive dose.” The defence was, that there was no negligence, and that death was due to suffocation, and not to the morphia. The jury decided that the prescription was the cause of death, but that Dr. Nicholson was not guilty of negligence.
When the post-mortem examination was made for the coronial inquiry, the larynx was not examined, and this no doubt gave rise to the defence that death was due to suffocation—an absurd supposition, very properly rejected by the jury. The point of interest to medical practitioners is the importance, when making a post-mortem examination for a coronial inquiry, of examining thoroughly and completely every organ of the body. The necessity for this precaution ought to be self-evident, but the case under consideration is only one out of many in which it has been neglected. An experienced coroner will generally detect the neglect, and see that it is rectified; but when the coroner is not a medical man, the omission is apt to be unnoticed, and might be serious.

The profession generally will be satisfied with the decision in this case. Had the verdict been for the plaintiff, there was a possible risk that whenever a patient died soon after taking a prescription, the friends of the patient might regard it as a case of post hoc ergo propter hoc, and be tempted to sue the unfortunate prescriber. Such a risk must be always very slight, and after this case, will probably be still slighter.

The next question that suggests itself is, What is the maximum dose of morphia, and to what authority are we to look to determine what is a proper dose? It has certainly been customary to regard the British Pharmacopoeia as such an authority, and it gives half a grain as the maximum dose of morphia, as does every text-book on Materia Medica and Pharmacology we have been able to consult. Yet the witnesses for the defence, including an Examiner in Medicine (who was for some time Lecturer on Materia Medica) at the Melbourne University, swore that they did not consider a grain of morphia by the mouth an excessive dose, and it was said that the British Pharmacopoeia was merely a guide to pharmacists, and not to be taken as an authority on dosage.

If the young medical graduates of the Melbourne University, or any other practitioners, are permitted to believe that a grain of morphia and twenty grains of antipyrin is a proper prescription to be given to a case of ordinary influenza the
first time it is seen, it is to be feared that the next epidemic in Victoria will show a marked increase in its fatality. It is to be hoped that Dr. Nicholson, and those who gave evidence on his behalf will, in future, be content with more moderate doses to start with, which can be gradually increased if required. We feel it our duty to protest against a growing tendency to prescribe needlessly large doses, especially of some of the newer drugs like antipyrin, antifebrin, sulphonal, nitro-glycerine, &c. Every one would have been very sorry to see Dr. Nicholson mulcted in damages for what was simply one of those unfortunate accidents, due perhaps to errors of judgment, or perhaps quite unavoidable, which may happen to any member of the profession, without any want of skill, of knowledge, or of care; but if the case helps to make us all more cautious in our prescribing, good may come out of evil.

THE INTERNATIONAL MEDICAL CONGRESS.

In connexion with the International Medical Congress, which will be held in Rome in September next, the President, Professor Guido Baccelli, and the General Secretary, Professor Maragliano, have addressed separate communications to Dr. Sydney Jones, and to Professor Allen, requesting them to take steps to constitute an Australian National Committee. In compliance with this invitation, joint action has been taken, and Sectional Committees are being formed in the various Colonies. Legally qualified members of the Medical Profession are invited to enrol themselves as Members of the Congress, to contribute short original papers, and to connect themselves with one of the eighteen Sections into which the Congress will be divided, namely:

1. Anatomy.
2. Physiology.
3. General Pathology and Pathological Anatomy.
4. Pharmacology.
5. Internal Medicine.
7. Psychiatry and Neurology.
8. Surgery and Orthopedia.
10. Laryngology.
11. Otology.
15. Hygiene.
17. Dermatology and Syphilography.
18. Legal Medicine.
The Subscription for Australian Members is one guinea, with a shilling added for exchange. Members will receive the transactions, but will probably be called upon to pay the postage thereon, amounting to about three shillings. For the present, Professor Allen is acting as Secretary and Treasurer, but Local Secretaries will soon be appointed in the Several Colonies.

Reviews.


In conception and design, this is truly a magnum opus. To give an accurate and detailed account of all the hospitals and asylums in the world, their origin, history, construction, administration, management, and legislation, seems a herculean task, almost beyond the powers of a single individual. Mr. Burdett must, therefore, be heartily congratulated upon the successful accomplishment of his twelve years' labour. Messrs. J. and A. Churchill have published in a commensurate style the first two volumes dealing with Asylums.

While recognising to the full the magnitude of the work, and the energy and zeal of its author, one is tempted to enquire after all, cui bono? Is the result worth all the trouble, seeing that much of the information will soon be obsolete? We can only hope that the book will achieve the object which Mr. Burdett states in his preface has been one of his chief aims, viz., to aid in securing inter-communication and co-operation amongst all who are engaged in the administration of asylums and hospitals, and in the treatment of their inmates, throughout the world.

The first volume deals with the history and administration of asylums; and the first four chapters, tracing the gradual changes in the way insanity has been regarded and treated, from pre-Christian times to the present, are full of interest and information. Chapter V deals generally with the present condition of asylums, and the succeeding ones give more detailed information concerning the state and mode of administration of asylums in different countries. There is considerable lack of uniformity about this portion of the work, and the difficulty of keeping the information up to date has evidently been very great.

Lunacy legislation receives considerable attention. With the exception of France and Germany, the laws relating to insanity
are regarded as unsatisfactory. In America for instance, there is no general law, but "each state possesses its own body of laws varying in scope and volume from the rudimentary regulations of the territory of Arizona to the elaborate and comprehensive codes of Pennsylvania and New York." Chapter XV deals with Asylum Nursing and the training of attendants for the insane, which is passing through stages somewhat similar to those marking the development of hospital nursing. Mr. Burdett quotes largely and approvingly from the writings of Mr. W. A. F. Browne, Dr. Clouston, Dr. Campbell Clark, and Dr. Cowles on this subject.

Vol. II deals with Asylum Construction. It appears that in all communities the same mode has been practically adopted in the past, and that mode Mr. Burdett considers is ill adapted to secure the most favourable results to the inmates. Unfortunately, also, most modern buildings are reproductions of the old style. The various types of existing buildings are classified as—(1) The irregular or conglomerate (the prevailing type); (2) the corridor; (3) the pavilion; (4) the corridor pavilion. Mr. Burdett's own ideal is, that buildings should be provided for the noisy classes, separate from the others; that detached cottages should be multiplied; that large wards should be broken up as much as possible, so as to promote the grouping of patients, and their separation according to character, mental state, &c. Then follow descriptions of examples of the four types above mentioned with plans, and a list of asylums which can be classified under each type. The remaining chapters treat of Asylum Construction in Scotland, in France, and in Germany respectively. The Appendix contains the Report of the Committee of the London County Council on a hospital for the insane, and papers on Hospitals for the Insane, and Clinical Instruction in Asylums, by Richard Grieve, and on the Bearing of Hospital Adjustments upon the Efficiency of Remedial Treatment in Mental Disease, by J. P. Bancroft. There is a copious bibliography and index.


The previous edition of this useful work being out of print, a new edition has become necessary, and has been brought up to date. It is very accurate and reliable, and full of valuable information.
Prescribing and Treatment in the Diseases of Infants and Children.


We are glad to see that our prophesy that a new edition of this useful little work would soon be necessary has been fulfilled. The following new sections have been added:—Adenoid Vegetations, Influenza, Ophthalmia Neonatorum, Snake-bite, and Throat Cough. It can be confidently recommended as a reliable compendium of the subjects it treats of.

University Intelligence.

MELBOURNE UNIVERSITY.

The following are the results of the recent Ordinary Examinations in Medicine:—

First Year Medicine.


Second Year Medicine.


Third Year Medicine.


Fourth Year Medicine.


Fifth Year Medicine.

G. W. Armstrong, E. A. Barrett, J. Box, R. C. Brown, W. T. Chenhall, A. Cowen, W. E. Davies, J. G. Desailly, D. T. Harbi-
The following are the results of the recent Honour Examinations:

**SECOND YEAR MEDICINE.**


**THIRD YEAR MEDICINE.**


**FOURTH YEAR MEDICINE.**


On the 14th ult., the following Degrees in Medicine and Surgery were conferred:


Doctor of Medicine.—W. P. Norris, M.B.

Vital Statistics.

The Government Statist's report on the Vital Statistics of Melbourne and Suburbs for October 1892, shows that the births of 1373 children, viz., 706 boys and 667 girls were registered. The deaths registered numbered 512, viz., 270 of males and 242 of females. To every 1000 of the population of the district, the proportion of births registered was 2.79, and of deaths 1.04. Of those who died, 95 were under one year of age, the total number under five years of age being 135. As compared with the previous month, a slight increase took place in deaths from typhoid fever and diphtheria; but from most other complaints the deaths were much below the average. The high death rate of child-bearing women mentioned in the report for September was not sustained in the month under notice, only 6 deaths of such women having occurred, as against 15 in the previous month.

The following is a statement of the deaths set down to typhoid fever and diphtheria in each month of 1892 and the two previous years:

Deaths from Typhoid Fever and Diphtheria, 1890 to 1892.

<table>
<thead>
<tr>
<th>MONTHS</th>
<th>Typhoid Fever</th>
<th>Diphtheria</th>
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<tbody>
<tr>
<td></td>
<td>1890</td>
<td>1891</td>
</tr>
<tr>
<td>January</td>
<td>78</td>
<td>25</td>
</tr>
<tr>
<td>February</td>
<td>73</td>
<td>32</td>
</tr>
<tr>
<td>March</td>
<td>89</td>
<td>36</td>
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<tr>
<td>April</td>
<td>63</td>
<td>30</td>
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<tr>
<td>May</td>
<td>36</td>
<td>20</td>
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<td>June</td>
<td>20</td>
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<td>July</td>
<td>12</td>
<td>10</td>
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<tr>
<td>August</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>September</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>October</td>
<td>7</td>
<td>..</td>
</tr>
<tr>
<td>Total</td>
<td>386</td>
<td>172</td>
</tr>
</tbody>
</table>

Burroughs, Wellcome and Co.'s "A B C" Medical Diary and Visiting List for 1893, is to hand. It is bound in several styles to suit the tastes of all, and will be found very useful. It also contains brief notes on modern preparations.
ON A NEW METHOD OF TREATING SYPHILIS—
PRELIMINARY NOTICE.

To the Editors of the "Australian Medical Journal."

GENTLEMEN,—I am at present preparing a paper on the above subject. It will include the notes of thirteen cases treated by a method entirely new, and the results up to the present have been quite satisfactory. My experiments have extended over a period of three years.

The treatment consists in converting the hard non-suppurating bubo into a soft suppurating bubo, by the introduction into its substance of an irritant. Then, having thoroughly scraped the walls of the ulcer, draining it in the ordinary way.

I base my theory upon the idea that the syphilitic poison is localised in the affected gland for a certain length of time, and that, by attacking this reservoir, it is possible to eliminate the micro-organism before it has been introduced into the system through the lymphatic circulation.

I shall be glad if those who have opportunity, will try the method and make known their results, as it can only be tested by a very large number of cases.

Collins Street.

December 1, 1892.

H. M. O'HARA.

Local Subjects.


HEALTH OFFICERS.—The following appointments have been confirmed:—Portland Shire, East Riding—John Anderson, M.D., vice Navroji Bamanji Gandevia, M.R.C.S., left the district; Portland Shire, West Riding—William Mackay, M.B., vice Navroji Bamanji Gandevia, M.R.C.S., left the district; Rodney Shire, Mooroopna Riding—James William Florence, M.D., vice Charles John Trood, M.B., resigned; Swan Hill Shire, Lower Murray Riding.

PUBLIC VACCINATORS.—The following appointments have been made:—Branxholme—John Anderson, M.D., vice Navroji Bamanji Gandevia, M.R.C.S., whose resignation has been accepted; St. Kilda West—William Bailey Rankin, F.R.C.S., vice Arthur Frederick Davenport, M.B., whose resignation has been accepted; Terang—Charles Stanford Sutton, M.B., vice John Marchbank, M.B., whose resignation has been accepted; to date from October 21, 1892; Yan Yean and Whittlesea—Alexander Sutherland, M.B.; Avoca—William Johnson, L.R.C.S.

The Committee of the Children's Hospital, at its meeting on the 30th ult., granted Dr. Snowball leave of absence from hospital duty, and Drs. E. A. Mackay and R. R. Stawell were appointed to see his out-patients during his absence.

On the 3rd inst., a case of small-pox was discovered at Petersberg, S.A. The patient is a girl, æt. 5, a recent arrival by the Karlsruhe. It is surmised that the patient contracted the disease at Colombo. She had not been vaccinated.

The Alvarenga Prize for 1892, has been awarded to Dr. R. H. L. Bibb, of Saltillo, Mexico, for his essay, entitled:—"Observations on the Nature of Leprosy."

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BIRTHS.

BLACK.—On the 1st inst., at 47 Brunswick-street, Fitzroy, the wife of Archibald G. Black, M.B. et C.M., of a son.

ESLER.—On the 10th inst., at Rathlin, Heathcote, the wife of A. W. Esler, M.D., of a son.

GOODALL.—On the 25th ult., at Draycott, Brighton-road, St. Kilda, the wife of Charles Goodall, M.B., Ch.B., of a son.

MORTON.—On the 23rd ult., at 39 Brunswick-street, Fitzroy, the wife of Dr. Morton, of a daughter.

O'SULLIVAN.—On the 8th inst., at Yarrawonga, the wife of Edward F. O'Sullivan, M.D., M.Ch., of a son.

ROSS.—On the 10th October, at Dimboola, the wife of W. Chisholm Ross, M.B. et Ch.B., of a daughter.

SANDFORD.—On the 16th ult., at Victoria House, Great Davis-street, South Yarra, the wife of Dr. Arthur W. Sandford, of a son.

STANTON.—On the 14th ult., at Kew, the wife of Thomas Stanton, M.D., Dub., of a son.

MARRIAGES.


BARRETT—JOHNSON.—On the 1st inst., at the Presbyterian Church, Toorak, by the Rev. J. F. Macrae, M.A., Annie Jessie, only surviving daughter of the late Archibald Johnson and of Mrs. Nicholas, Toorak House, Toorak, to Dr. John Edward Barrett, second son of Dr. Barrett, South Melbourne.

DEATHS.

DAVIES.—On the 9th inst., at Woodlands, Northcote, Alice Irene, youngest daughter of Dr. T. S. and H. A. Davies.

JEE.—On the 15th ult., at Iuchieque, Alexandra, Edith Waymouth, infant daughter of Dr. Henry C. and Edith Jee, aged 13 days.

O'SULLIVAN.—On the 27th ult., at Yarrawonga, Francis Egeon More, dearly-beloved elder son of Dr. Edward and F. E. O'Sullivan, aged 13 months.
direction, offering very large development, has been made in securing uniformity and reliability in the new "Tabloids of Tinctures." These "Tabloids" are made from freshly standardised tinctures of various drugs, and consequently are accurate in dosage. Where the exhibition of single drugs can be admitted, these "Tabloids" are immeasurably superior to the liquid preparations. A very important aspect of these "Tabloids of Tinctures" is the value to the devotees of total abstinence; for these Compressed drugs are absolutely free from alcohol—a piece of information which will be extremely valuable and interesting to this large, important, and enthusiastic community. The more generally prescribed, and consequently the more important of the tinctures, such as Belladonna, Aconite, Opium, Compound Camphor (Paregoric), Hyoscyamus, Nux Vomica, the stronger Ginger (so-called Essence), are already represented in the list of "Tincture Tabloids;" and it is to be hoped that, as time goes on, and experiments warrant, everyone of this class of galenical preparations with any demand for it at all, will be added. The convenience to the physician, of having reliable, uniform, and portable material at hand, is too obvious to require reference; while to the patient, tired of, and disgusted with nauseating and palatable mixtures, the "Tabloid" system becomes an inestimable boon. The following have already been submitted to, and obtained the approval of, the medical profession:—

"TINCT: TABLOIDS"

(Official Tinctures).

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage</th>
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<tr>
<td>Belladonna Tinct. &quot;Tabloids&quot;</td>
<td>1 min.</td>
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<td>&quot;&quot;</td>
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<td>15 &quot;</td>
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<tr>
<td>Camph. Co. Tinct.</td>
<td>5 &quot;</td>
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<td>&quot;&quot;</td>
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<tr>
<td>Cannabis Indica Tinct. &quot;Tabloids&quot;</td>
<td>5 &quot;</td>
</tr>
<tr>
<td>&quot;&quot;</td>
<td>1 &quot;</td>
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<tr>
<td>Nux Vom. Tinct. &quot;Tabloids&quot;</td>
<td>1 min.</td>
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<tr>
<td>Opii Tinct. &quot;Tabloids&quot;</td>
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<td>Zingit. Fort.</td>
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Absolutely the most absorbent dressing made. Thoroughly antiseptic, gives perfect drainage, and does not heat. Absorbs discharges of every description.

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In a continuous roll, consisting of a layer of Hartmann's Patent Wood Wool Wadding between two pieces of Silk Gauze, possessing all the merits detailed above, with the advantage that any size pad can be cut off with the scissors.

These Sheets are made of Hartmann's Patent Wood Wool Wadding, the most absorbent substance ever known. They are most comfortable and healthy, are perfectly antiseptic, have not the disagreeable smell so common to India-rubber sheets, and are much cheaper. In Accouchement, a large sheet is laid under the patient, absorbs the discharge completely, and is simply burnt after use; no soiled clothes, risk of puerperal fever greatly lessened, and perfect comfort and cleanliness.

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FOR MENSTRUATION AND ACCOUCHEMENT. They are Most Comfortable and Healthful. They are Soft and Antiseptic. They Cost no more than the Washing of Ordinary Diapers. Risk of Infection is Avoided. They are Invaluable at Home, and of Great Service to Ladies when Travelling. After Use they are Simply Burnt.

Hartmann's Diapers are made of PURE PINE, are perfectly Antiseptic and Soft; they therefore possess many advantages over the various makes of cotton wool pads.

The most comfortable, clean, and healthful appliance ever made for this complaint. No patient should be without them. They absorb all discharge, avoid soiling clothes, and the cheap price brings them within the reach of everyone.

Highly recommended by the Leading Surgeons for this Special Complaint.

The following ADVANTAGES are claimed for this Protector:

1. It protects the arm from external violence.—2. It absorbs all discharges.—3. Most important of all, it reduces the risk of septic absorption and blood-poisoning.—4. It cannot be used a second time like ordinary "shields," which it is too often the dangerous practice to use again and again.—5. Lastly, and not its least advantage, is its extreme cheapness.

Highly recommended by the principal Public Vaccinators.