

## HOW SURGERY CAME TO AUSTRALASIA.<sup>1</sup>

By SIR D'ARCY POWER,

*Consulting Surgeon, Saint Bartholomew's Hospital, London; Honorary Librarian, Royal College of Surgeons of England.*

It is not often possible to trace the progress of surgery from the start in a new country. I wish someone would write a novel dealing with the beginning of medicine, surgery and midwifery in Australasia after the same style as Dr. Weir Mitchell wrote "Hugh Wynne—Free Quaker" in 1898, which deals with the beginnings of medicine in America. Such a novel would be intensely interesting and could be founded on fact. Some are still living who have had actual experience of medicine in the early days of the colony. Many have heard from their fathers of what they went through in their youth and middle age, and know the spirit which inspired those pioneers to raise their profession from humble beginnings to the position it now holds.

Surgery came to Australasia pretty equally from England, Scotland and Ireland. Just a hundred years earlier it had reached America almost entirely from Edinburgh. A few American surgeons had come as students under the influence of John Hunter in London, but the great majority of the sons of wealthy and ambitious men graduated from Edinburgh. There alone in the latter half of the eighteenth century was a complete and well equipped medical school provided with teachers who had gained a world wide reputation. By 1855, the year of my own birth, the English and Irish medical schools had become well regulated institutions with traditions and a complete curriculum. The *Medical Act* of 1815 had made compulsory a certain minimum of medical knowledge as tested by examination at the Society of Apothecaries and the Royal College of Surgeons. The *Registration Act* of 1858 made it possible to distinguish the registered practitioner from the quack.

### THE BEGINNINGS OF SURGERY IN AUSTRALASIA.

It was far otherwise in Australasia. We read that in 1856:

No law exists to prevent any person whether educated for the medical profession or not from using any medical title that he may choose or from practising any branch of the healing art that he may find profitable. Ignorance and impudence are the chief acquisitions. Hundreds of mourning friends and relatives can testify to the system of manslaughter which was carried out to so great an extent in the goldfields of the colony. The druggist and the farrier may perform the duties of a physician: the butcher or barber that of the surgeon.

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<sup>1</sup> Read at the opening of the Royal Australasian College of Surgeons, March 4, 1935.

You were, in fact, exactly in the position of your English predecessors in the reign of the Tudors, when, as Thomas Gale writes, in 1566:

I remember when I was in the wars of that most famous prince, King Henry VIII, there was a great rabblement there that took upon them to be surgeons, some were sow-gelders, some were horse-gelders, with tinkers and cobblers. This noble band did such great cures that in two dressings they did commonly make their patient whole and sound so that they felt neither heat nor cold for ever, but did die, and that of small wounds.

Fortunately you were in a new country without traditions, not bound by any charters, warrants or customs of corporate bodies. You did in a single generation what it took us three hundred years to accomplish.

The earliest doctors were army surgeons attached to the regiments quartered here; others came out as surgeons in the emigrant ships. The gold rush increased their numbers and the end of the Crimean War left many young doctors at a loose end. The majority of these young men were of an unsettled type. Most of them had sporting instincts, and some had a love of drink. All were out to make a living, and all were willing to take things as they found them. Landing in Melbourne, they found a settlement of shacks, biscuit boxes and corrugated iron, which was described in 1871 as being filthy, and the sanitation in 1890 as being on a par with that of China and Japan.

A virile race, mostly young, and living in the open air with abundance of food, did not require much surgical assistance, except for accidents, and there would not have been work for a doctor if it had not been for the great scourges of typhoid fever, diphtheria and hydatids, because the aetiology of none of them was then known.

Hygiene had not advanced sufficiently to warn the citizens against depositing crude nightsoil upon the banks of a river whose waters they drank, or from using it in their kitchen gardens. Midwifery, however, was an unflinching rallying point. Every practitioner was an expert obstetrician. His interests lay in that direction, and for many years such original papers as were printed or discussed dealt with the subject. It thrust itself, like King Charles's head, into every debate where two or three doctors were gathered together.

The first book on surgery published in Melbourne was entitled: "Original Contributions to the Practice of Conservative Surgery", by James G. Beaney, M.R.C.S. (Edin.); Melbourne, George Robertson; 1859. It met with a scurvy reception at the hands of the reviewers, one of whom wrote:

There is not a particle of information to be gleaned from these "Original Contributions" which may not be found in the ordinary textbooks upon the subjects they (the Contributions) profess to discuss. The book—price twelve shillings—is an advertisement setting forth that the author is in want of patients to which his book may haply help him. As a specimen of bookmaking it perhaps deserves credit for being a proof of the extraordinary effrontery which a man claiming to himself the practice of a reputable member of a responsible

profession can exhibit to the world. (*Melbourne Medical Journal*, 1860, Volume v, page 66.)

There is plenty of evidence to show that the medical men in the earlier days were both quarrelsome and aggressive.

It is on record, for instance, that two doctors differed at a consultation about the diagnosis and, at the patient's bedside, the one assaulted the other. They were both brought before the ethical tribunal, and it was pointed out to them that even if one had been guilty of a breach of etiquette, the other should not have punched his colleague's head—at any rate in the patient's bedroom.

Side by side with the doctors were hordes of quacks as impudent as they were ignorant. A *Medical Act* was passed in 1864. It gave some power of control over these pests who "cured by the imposition of hands, by breathing on the skin through a red rag, by friction with magnetized water, and in similar ways". The quacks tried to get on the register by many subterfuges. They forged diplomas and licences from non-existent universities. They even claimed to have the M.D. of Paris, then the most difficult of all M.D. degrees to obtain, but the documents to prove it had been lost on the voyage or had been mislaid and, unhappily, too, they had forgotten every word of their French. "Dr." Vernon stated by his counsel that he ought to be placed on the register because he had practised without let or hindrance for twelve years and, although he had no qualification, he was not in the habit of getting drunk. The defence availed him nothing. He was fined £50 or two months.

It was worse in New South Wales, where there was no machinery at all for dealing with unlicensed practitioners as lately as 1887. Queensland was in a better position than either Victoria or New South Wales. Quacks could be prosecuted there from quite early times.

There were, however, some honourable, sensible and farseeing medical men amongst you even in those early days. They set to work to organize and cleanse the profession, and in 1852 they formed the Medical Society of Victoria. It soon had a list of 68 members, and in 1856 published the first volume of the *Australian Medical Journal*.

#### PREVISION OF AN AUSTRALIAN COLLEGE OF SURGEONS.

An inspired leading article appeared in the second volume in which the present College of Surgeons was clearly envisaged, though it has taken three-quarters of a century to bring it to fruition. The article says:

It is now a little more than three years since the University of Melbourne was opened by the late Sir Charles Hotham and the first matriculation of pupils took place. We fully agree with those who feel that as there is a University all who can render assistance towards its full development and aid in the attainment of the objects for which it is established should do so cheerfully. Considering it from this point of view we should be glad to see a College of Surgeons and School of Medicine affiliated to it.

We conceive that not only has the time arrived for a School of Medicine to be established, but the necessity also. As to the time, if we wait until

we have a sufficient number of young men ready to present themselves as students in medicine we shall wait in vain. How can we expect persons to seek an object for the attainment of which there are no means? Found the College, appoint the teachers, and the pupils will soon appear. At the present moment there are not a few—we know some—who would rejoice to enrol their names in medical classes, and others whose parents would be happy to send their sons to be educated in the medical profession if there were a school of medicine in Melbourne.

As to the necessity, among the thousands of young men now entering into adult life there are no doubt some who desire to embrace the profession of medicine, but the expenses of the voyage to and from Europe, of a residence of at least three years where they should prosecute their studies, and of college and class fees render the outlay too heavy. The parents or guardians of others whose affluence would easily admit of this heavy outlay, very probably dread the danger (moral as well as physical) of sending their sons so far away and for a period so protracted at a time of life also when, if unprotected by friends and family, or unrestrained by wholesome control, they would become easy victims to the seductions of a gay metropolis.

We have reason to believe that there are in various localities throughout the colony persons practising medicine who have completed the curriculum of medical education required by British colleges, but who have not passed their final examination and obtained their diploma or degree. To these the benefit of a College of Surgeons would be paramount, giving them the opportunity of becoming by examination legalized practitioners.

Lastly, it would be well to have a College of Surgeons established before other and conflicting interests should arise or monopolies come into existence which might in a few years hence render the establishment of such a College or its affiliation to the University a matter of considerable difficulty.

A medical school in connexion with the University of Melbourne was opened on May 1, 1866, though Professor Halford had given an inaugural lecture on May 15, 1863. The theoretical part of medical education seems to have been well taught, and the examination questions, which were regularly published, were of a searching character. The method of election to the staff at the Melbourne Hospital, however, prevented the professor of surgery from having the care of beds. He was, therefore, in the same position as was Lister about the same time at the University of Glasgow. The clinical teaching of surgery suffered accordingly. There were no dressers, there were no clinical lectures, and there was no systematized bedside teaching. The teaching of practical anatomy too was difficult, for it was almost impossible in a small community to obtain subjects.

#### MEDICAL SOCIETIES.

The Port Phillip Medical Association was founded with six members in 1846. It was one of those book clubs which were also greatly favoured in England at about the same period. The subscription was spent in books, which were circulated during the year and raffled for at Christmas.

The association seemed to have lasted until 1865, when the suppers had become too elaborate for individuals, and the meetings were taking place at the Prince of Wales Hotel. The circle was enlarged, and the Victoria Medical Association was brought into existence in 1852, together with a select Medical Chirurgical Society of Victoria, which in the same

year numbered eighteen members. The three little clubs united in the following year (1853) to form the Medical Society of Victoria, which mustered sixty-four strong in 1863.

#### EARLY SURGEONS.

There was no special class of pure consultants, even as late as 1887, such as you now have, or as we had been long accustomed to in London. Every man was more or less a general practitioner, and each one in turn might be called into consultation in any department of medicine, surgery or midwifery. Your largest cities were not so large but that every man's practice overlapped every other man's and all came into a kind of competition. There was, moreover, a freedom of intercourse, a circulation of news and a canvass and criticism of medical work and professional men such as was impossible in the larger and less democratic cities of Great Britain.

Of the sixty-two members of the Victorian Medical Society in 1870 two were M.D. of Edinburgh; three M.D. of Glasgow; three M.D. of St. Andrews; fourteen M.D. of Melbourne; one M.D. of Maryland, United States of America; one M.D. of Giessen; one M.D. of Würzburg; one M.D. of Marburg; one M.D. of Erlangen; one M.B. of London; two M.B. of Melbourne; one M.B. of Sydney; four F.R.C.S. England; one F.R.C.S. Edinburgh; and twenty-six M.R.C.S.—a very fairly representative assembly.

The first F.R.C.S. England to settle in Australia was Edward Samuel Pickard Bedford, who died in 1875. He qualified M.R.C.S. on March 15, 1823, and was admitted a Fellow on April 19, 1854. He is said to have been educated at the Colonial Hospital, Hobart, at King's College and at Guy's Hospital. He practised in Tasmania, where he was a member of the Medical Board, and afterwards in Sydney, becoming Medical Advisor to the Government and President of the Board of Visitors to the Lunatic Asylum.

The major operations in Victoria were undertaken by a Welshman, three Englishmen, an Irishman and a Scotsman, to take them in the order of their seniority. All were interesting personalities, and their services to colonial surgery should be mentioned.

The Welshman was John Davies Thomas. He was born at Llwyn-y-Berlian, Carmarthenshire, in 1813, and was trained at the Swansea Infirmary, afterwards at University College London. Here he came under the direct influence of Robert Liston. In 1839 Thomas settled in Melbourne, and died in 1871, having spent his later years at Adelaide studying the life history of hydatids, and had extended his name to J. Davies Thomas.

The senior of the three Englishmen was Edward Barker, born in 1818. He was educated, like Thomas, at University College, where he acted as house surgeon, and was admitted M.R.C.S. in 1839. He too must have been influenced by the example and fame of Robert Liston, but his interests lay rather in the direction of operative midwifery, which in the end proved his downfall. He died in 1885.

Tharp Mountain Girdlestone was born in 1823. He was educated at Saint Bartholomew's Hospital, where he was house surgeon when Sir James Paget was warden of the Residential College, Lawrence and Stanley being the surgeons. He was the best known in England of all the surgical profession in Melbourne because he introduced kangaroo tendon for ligatures, showing the first examples, the result of his own curing, at a meeting of the Victoria Medical Society on December 5, 1887. He died in England in 1899.

The third Englishman was James Thomas Rudall, born in 1828. He qualified M.R.C.S. in England in 1854, after an education at Saint Thomas's Hospital. He became an assistant surgeon in the Royal Navy, and sailed in Her Majesty's ship *Talbot* on one of the last expeditions in search of Sir John Franklin. He resigned his commission on the return of the expedition, was elected F.R.C.S. England, and arrived in Melbourne in 1858. He soon obtained a good surgical practice, and was somewhat of a specialist in diseases of the eye, nose and throat. He died in 1907.

Samuel Athanasius Cusack was born in Dublin in 1830, and brought with him the great tradition of Irish surgery. He received his medical education at Steevens Hospital, Dublin. A year or two in the unhealthy atmosphere of the Dublin dissecting rooms undermined his health. He came to London, took the M.R.C.S., having already qualified at home, and was gazetted surgeon to the fifty-fourth regiment of foot in 1854. Ultimately he came to New Zealand, where he was appointed surgeon to the Colonial Hospital at Nelson. He reported from there in 1866 a case of excision of the hip, the removal of an enchondroma from the tibia and the ligation of the femoral artery for traumatic aneurysm. Ill health, however, pursued him. He moved to Melbourne, and then to Maitland, New South Wales, where he died on February 9, 1869.

Paul Howard MacGillivray, F.R.S., LL.B. Aberdeen, was born in 1834, the son of Dr. William MacGillivray, Professor of Natural History in Marischal College, Aberdeen, and the author of a well known history of British birds. He took the M.R.C.S. in 1855 and arrived in Victoria in 1862. He was appointed surgeon to the hospital at Sandhurst, near Bendigo, and began to study the fossil Polyzoa of South Australia and the Polyzoa of Victoria. His friends looked upon him at first as a mere naturalist. To their surprise he developed an unexpected talent for operative work, specialized in surgery, made a great reputation throughout the colony, and died of erysipelas on July 9, 1895.

Arthur Martin À Beckett was the first Fellow of the Royal College of Surgeons of England to settle in New South Wales. He claimed direct descent from the father of Saint Thomas à Beckett, the Archbishop, murdered in Canterbury Cathedral in 1170. Born in 1832, Martin À Beckett was educated at what is now University College Hospital in London. He took his M.R.C.S. England in 1838, so he too must have been influenced by the example of Robert Liston, who had then recently come down from Edinburgh. Martin À Beckett served

with the British Army in Spain, and arrived in Sydney in June, 1839. Here he lived for thirty years, and was appointed surgeon to the Benevolent Asylum, a member of the Legislative Council of New South Wales, and an examiner in the medical faculty of the University of Sydney. He was elected a Fellow of the Royal College of Surgeons of England in 1855, and died in 1871. New South Wales was fortunate in obtaining the lifelong services of such a man. In a new country his example must have been of incalculable value to the medical profession.

Charles Nathan was the second F.R.C.S. in New South Wales. Born in 1807, he was elected F.R.C.S. in 1857. He began to practise in Sydney in 1842, and was surgeon to the Sydney Infirmary. For many years he had the chief surgical practice in New South Wales, though he was examiner in medicine in the University. He died in 1872.

There are many others well deserving of commemoration did time permit, for in each colony there was a wholesome leaven to combat the noisome growth of charlatanism which was ready to choke legitimate medical practice. And this leaven for good has led to the splendid position you now hold in the eyes of the world.

In New Zealand, for instance, Edward Hulme brought with him the teaching of Sir Charles Bell from the Middlesex Hospital, of Astley Cooper from Guy's, of Robert Liston from University College, and of Velpeau from Paris. I could tell you of Professor G. B. Halford, of John Williams, F.R.C.S., of William Smith (Demonstrator of Anatomy in Sydney), of Dr. F. C. Batchelor, of Professor Stirling of Adelaide, and of Dr. Margaret Amelia Corliss.

#### OPERATIONS.

The operations undertaken during the early period were, of course, representative of those which were not unusual in London, in Edinburgh and in Dublin. They were for the most part successful. The city was not densely populated and the hospital was not overcrowded. They were not attended, therefore, by the disastrous results which followed some years later when the hospital and staff in attendance became thoroughly septic.

#### *Aneurysm.*

Aneurysm was very common, the result of insufficiently treated syphilis and the hard manual labour required of the early settlers. Every medical practitioner had plenty of experience in treating aneurysm, and the records are full of the different methods used to cure it. Many ligatured the artery in its continuity (Hunter's operation) and were dissatisfied with the results. Secondary hæmorrhage occurred when the septic ligature came away on the seventh to the tenth day, and the patient too often died because the wardsmen who acted as nurses were grossly ignorant. Sometimes the operation was bungled, gangrene followed and the subsequent high amputation too often meant death. Nevertheless a few surgeons were bold enough to tie the sub-

clavian and the common iliac arteries. Others dispensed with operation, using Luther Holden's method of digital compression, or the flexion of the limb recommended by Ernest Hart.

#### *Stone.*

Victoria was the stone country in the earlier years of the colony. I do not know if it now holds that unenviable reputation. The treatment of stone was always a joy to the older generation of surgeons. They undertook lateral lithotomy, the final test of an operating surgeon in preanæsthetic days, with joy and pride, emulating in speed and dexterity what they had watched their masters do in London, in Edinburgh and in Dublin.

Lithotrity was greatly improved by Sir Henry Thompson at University College, London, about 1870, but as early as 1866 Girdlestone was using it, and it gradually displaced the old operation of lithotomy. Lithotrity lost favour in due time just as the lateral operation had fallen into disuse. It was replaced by removal of the stone from the kidney and by a suprapubic operation from the bladder.

#### *Hernia.*

Hernia was very common, more especially amongst the stockmen. Reducible hernia was treated with some kind of bandage, for there was no skilled truss maker at the time, though Frederick Lowe Jeffcoat was making surgical instruments at Otago between 1850 and 1860.

A few patients were subjected to the radical operation. Professor John Wood's method appears to have been generally used, although it required such a sound knowledge of anatomy that it was said only to be understood by Johnnie himself. The older surgeons, however, had been brought up in the dissecting rooms of their own medical schools in Great Britain, so occasionally they may have been successful.

Strangulated hernia was of necessity operated upon when prolonged taxis, warm baths and opium had failed. For some obscure reason it was customary to puncture the swelling with a trocar and cannula to draw off the fluid in the sac before making an incision. Operation, as in England, was the last resort, and, as in England, there were two schools—the one taught that the sac should not be opened, the other that reduction should not be attempted until the bowel had been exposed. In either case he was a proud man whose patient recovered and he would publish even a single successful case.

#### *Cancer.*

Cancer seems to have been by no means common. There are a few records of amputation of the breast, although there are a good many of cancer of the tongue.

#### *Bones and Joints.*

Tuberculous disease of the bones and joints was rife and, as in England, was badly treated. The value of rest in the early stages



was neither understood nor practised. A child with hip disease was allowed either to go about without any apparatus or was put into a Thomas splint without supervision, for there was no skilled nursing. Amyloid disease and death from exhaustion were the usual endings, but so they were with us, as I well remember.

Excision was in favour from quite early times. Edward Barker and William Gilbee both recorded successful operations for removal of the upper jaw and mandible.

Fitzgerald, in his inaugural address in surgery at the first Australian Congress in 1887, states—but, I am told, quite untruly—that there was an almost entire absence of rickets, and there were few deformities due to that disease. He says:

That if the whole of our colony were searched not five cases of *genu valgum* suitable for operation would be found. The Australian child is straight-limbed and level-featured; a neglected club foot may possibly be met with, and occasionally one runs across a "boiteaux" from chronic hip disease, but rickets and bone distortions arising from other causes than fracture are almost unknown.

#### *Amputation.*

Amputation was perhaps the most common capital operation. Severe injuries were numerous, and it was safer at a time when suppuration was encouraged to remove a limb than to try the effects of conservative surgery. A return from the Melbourne Hospital in 1862 shows that there had been 14 amputations and three deaths. At Bendigo, in 1870 to 1871, there were 80 operations and 26 were amputations. The report does not state the results.

#### *Hydatids.*

Hydatid disease was increasing because its method of propagation was not yet understood. D. J. Davies Thomas of Adelaide, who devoted much of his later life to its study, wrote in 1865:

Many persons suffer to a fearful degree from a parasitic disease—hydatids. It is very frequently fatal from the enormous size it sometimes attains and from several of these formations existing in some vital organ. I need hardly tell you that the larvæ are produced from the eggs of a tape-worm which finds its way into the stomach with the food and is taken directly into the circulation through the openings of the vessels in the intestinal canal. Many of those in the liver and abdomen are cured by introducing a small trocar and evacuating the fluid. This, however, often requires repeating. In order to check the extension of this parasite endeavours should be made to find out from what tape-worm the *Echinococcus hominis* springs and what animal is the medium of propagation. If this and other means be neglected, hydatids will soon be as common here as in Iceland. We are scarcely ever without a case of the kind in the hospital.

The forecast proved correct, but it was not until 1888 that Dr. Gordon Macdonald, of the Dunedin Hospital, gave a full account of the life history of *Tania echinococcus*, with an excellent coloured plate, in *The New Zealand Medical Journal*, Volume ii, 1887-1888, pages 80 and 142.

*Intussusception.*

Intussusception was frequent, to judge by the number of cases which were published from 1863 onwards. They nearly always ended in death of the baby, which is not surprising when, as in one case, the treatment consisted in a dose of calomel, an emetic and an injection followed by "a good dose of castor oil". The practitioner who reports the case seems to have been surprised that death took place sixteen hours after the onset of symptoms. You had, indeed, great need for the teaching and example of Dr. C. P. B. Clubbe in Sydney, who published seven cases of laparotomy in September, 1895, and strongly advocated immediate operation.

*Appendicitis.*

Appendicitis as we now know it was not uncommon. The two following cases show the method of treatment and how narrowly Victoria escaped the credit of having the first surgeon to operate deliberately for its relief. Here is the old method. It is reported in the *Melbourne Medical Journal* for 1865, and the patient recovered in spite of the treatment. It appears under the heading of "Occasional Communications". It is worth while reproducing because there are very few detailed descriptions of the symptoms and treatment of appendicitis when it was still called typhlitis or perityphlitis. The account too is very graphic.

"On a case of intestinal obstruction treated by chloroform." Dr. J. Davies Thomas, then surgeon to the Melbourne Hospital, says that he was summoned to a brother practitioner who, on December 12, 1864, had ridden 50 or 60 miles on the hot summer day of December 5. He felt tired when he got home, but ate a late dinner and afterwards lay down in the verandah and fell sound asleep. He awoke with a severe pain in his bowels, and for its relief took a dose of tincture of rhubarb. The pain continued all through the night and during the next day. He tried every means to relieve it and to get an action of the bowels, but without success. The attacks of pain became more frequent and he had very little sleep.

He sent for Dr. Nicholson on December 7 because he had begun to vomit. The vomiting continued throughout the next day (December 8), the pain became worse, the bowels were still unrelieved. On December 9 he began to hiccup. The vomiting increased on the tenth and towards the evening the vomit was fecal. The patient had been given warm baths and fomentations, sedatives, anti-spasmodic laxatives and repeated enemata; neither food, medicine nor drink would remain on his stomach.

Dr. Thomas saw him between 8 and 9 on the evening of December 12, just a week after the beginning of the illness. He found that there was tenderness all over the abdomen. Pressure caused considerable pain over a circumscribed space in the right hypochondriac region, and this led Dr. Thomas to suppose that the obstruction was in the ascending colon. None of the injections hitherto administered could be retained for a minute.

Dr. Thomas then goes on to say: "I first ordered an injection of turpentine, castor oil and gruel. Violent pain and tenesmus occurred when little more than half a pint had been thrown into the bowel and, as before, the injection could not be retained. I now ordered half a drachm of calomel as a sedative to delay the hiccup and vomiting for a time at least. This, the patient thought, would settle him, but as he believed that he had no chance of recovery he consented to take it. The large dose of calomel very soon temporarily checked the

hiccupping and vomiting. I told him I intended to administer chloroform. This startled him; he thought half a drachm of calomel in his weak state rather a dangerous dose, but the inhalation of chloroform he was sure would annihilate him altogether, but, as he was in my hands, he would abide by my orders and die *secundum artem*. I administered the chloroform by means of a handkerchief, and carried it to the fullest extent; there was no sign of life left except the abdominal respirations and a very small pulse at the wrist. When in this state an injection of salt water and turpentine was thrown up the bowel to the extent of three pints. He was then covered up and remained apparently asleep for twenty minutes. Slight vomiting then came on which roused him. He had no idea that an injection had been administered, but in a short time afterwards he felt inclined to have a motion. He was got on the night stool and nothing whatever passed but the injection. In a few minutes after he had returned to bed he passed some flatus. This made me more hopeful. He then vomited slightly, and the contents ejected bore the odour of turpentine. This, together with the improved expression and absence of hiccup and almost total disappearance of vomiting, made me more sanguine and enabled me to speak in a much more encouraging tone to my patient, which seemed to do him good. I now gave him some hot brandy and water, which, to his astonishment, remained quietly on his stomach. Shortly after this he had a feeling as if he were about to have a natural evacuation. He got on the night stool and passed a moderate quantity (about a tablespoonful) of liquid faecal matter. I ordered him a little beef tea and went to bed (this was about 3 a.m.), as there was now nothing more to be done. I got up at 9 and found that he had slept, had had four more evacuations and felt comparatively comfortable. I ordered him to take a small dose of granular citrate of magnesia every morning and a tincture of infusion of gentian three times a day. Henbane at night, if required. Beef tea once a day, either sago, maizena or arrowroot three times a day, and a tablespoonful of brandy in a wineglassful of water four times a day.

"He was confined to bed for a week. He took a holiday for a month, being half the time I recommended him, at which time he felt tolerably well, but still had an uncomfortable feeling in his right hypochondriac region. His system was severely shaken, and it was many months before he was restored to his usual health."

Dr. Thomas adds: "It has been my practice for a great many years to administer a large dose of calomel (I have given as much as a drachm) in cases of violent colic attended with vomiting and constipation, and, as a rule, I have found it capable of checking the urgent symptoms and, I believe, of completely arresting the progress of the disease. It is my opinion that many cases of constipation arise in the first instance from spasm, which, if not checked, goes on to inflammation, producing thickening and condensation of a portion of the intestine and thus renders it impermeable and liable to intussusception.

"The chloroform, in my opinion, destroyed the irritability in the intestinal canal. It removed any spasms that might have existed, and thus rendered the intestine in a state fit to retain a copious injection. It may, in this case, have reduced the powers of life to so low an ebb that the small blood vessels became relaxed and the blood was thus allowed gradually to subside in the hyperæmic portion of the canal. In inflammation of a portion of the intestine the principal action very frequently goes on in the serous coat, and since the colon is not entirely surrounded by the peritoneal covering, the whole calibre of the tube possibly may not have been involved."

It appears from this that appendicitis was common in the neighbourhood of Melbourne, and that the patients for the most part recovered, as otherwise a *post mortem* examination must have revealed the error of Dr. Thomas's reasoning and how near he got to the real explanation.

You will remember that the first operation for appendicitis as appendicitis was done at Guy's Hospital by Mr. Charters J. Symonds at the instigation of Dr. F. A. Mahomed in July, 1883. Treves published his work on intestinal surgery in 1885, and undertook the deliberate removal of a recurrent inflamed appendix on February 16, 1887, though he did not publish the case until February 14, 1888. These dates will remind you how near Melbourne could have come to claim priority for the operation if Dr. Webb had been fortunate enough to meet a fourth case of acute appendicitis in 1884.

In that year on October 1 he read "Notes on Three Cases of Perforation of the Vermiform Appendix", by J. H. Webb, M.R.C.S. (Eng.), L.R.C.P. (Lond.) (*Melbourne Medical Journal*, 1884, Volume i, New Series, pages 436 to 443). He says:

The cases happened within the last five years and occurred wholly in my private practice. The first patient was a girl of 15, and she died; the second patient was also a girl, rather older, she died also; the third patient was a middle aged man, who died.

Mr. Webb then goes on say that he believes lesions of the vermiform appendix to be commoner than is generally supposed. Drugs are useless, but patients should not be left to die.

The mind once made up (our fault is to wait too long) immediate action should take place. I certainly would advise abdominal section, and if I ever have such another case go through my hands I shall open the abdomen, say "Nay, who will". The operation will at least give a chance. This may appear heroic and fantastic surgery, but surgery is only for those who have boldness to accomplish. Let those who cavil remember that more lives are lost through faint heartedness than ever are sacrificed through abuse of the scalpel.

Brave words, and it is a great pity that he does not appear to have had an opportunity to carry them into action.

#### LISTERIAN SURGERY.

Lister's campaign against wound infection and hospital gangrene began, says Sir Rickman Godlee, on August 17, 1865. The methods he adopted were published in *The Lancet* in a series of articles beginning on March 16, 1867, though it was not until April, 1875, that germs were recognized as a cause of suppuration, nor until 1878 that Littré invented the convenient word "microbe" to designate them. The first rumblings of this coming revolution in surgery must have reached Australasia very quickly. Mr. William Gilbee, surgeon to the Melbourne Hospital, wrote a short paper on December 4, 1867, "On the Treatment of Abscess and Compound Fracture by Mr. Lister's New Method" (*Melbourne Medical Journal*, 1868, Volume xiii, pages 20 to 24). He says that he had been assisted in its preparation by his resident surgeon, Dr. Maunsell. It marks a definite epoch in Australian surgery and is, therefore, of historical value.

Case I was that of Mary Gregory, aged eleven years, who had a large cold abscess which extended from an inch above the left great trochanter to about the centre of the thigh. It was associated with spontaneous dislocation of the

hip, evidently the result of tuberculous disease. A solution of one part of carbolic acid in four parts of boiled linseed oil was prepared. A piece of rag six inches square was dipped into the mixture and laid on to the skin where the incision was to be made. The lower end of the rag being then raised, a scalpel dipped in the oil was plunged into the cavity of the abscess, and the instant the knife was withdrawn the rag was dropped upon the skin as an antiseptic curtain, beneath which the pus flowed out into a vessel placed to receive it.

The cavity of the abscess was firmly pressed so as to force out all existing pus, and about twenty ounces were evacuated. A piece of lint dipped in the antiseptic oil was introduced into the incision to check bleeding and to prevent the primary adhesion which might otherwise have occurred. One ounce of pus escaped the next day when the plug was removed under cover of the antiseptic rag and firm pressure was applied. The discharge did not exceed two drachms in the next two days. On the fourth day the abscess had contracted and the wound was entirely healed. There was a perfect absence of all constitutional disturbance during this period; the tongue was clean, the pulse normal, the appetite good and she slept well. A long splint was applied.

Case II. Mary Downer, aged 46, was admitted on the 23rd November, 1867, under the care of Mr. Garrard. She had a fracture of the internal malleolus and a compound dislocation outwards of the lower end of the fibula. Mr. Garrard removed with a saw the lower end of the fibula, which was protruding through the skin, and he immediately dressed the wound according to Mr. Lister's method. It was then well strapped and bandaged and placed upon a McIntyre's splint which had been given to her. The dressings were removed on December 2nd, that is to say, nine days later, when the wound looked healthy and had discharged about half an ounce of pus mixed with serum. It was redressed according to Mr. Lister's method. Two days later, on December 4th, it was redressed again. The wound looked well and had discharged about an ounce of serum with merely a trace of pus.

Mr. Gilbee ends his communication with the words:

The results of these two cases are of a kind to assure me that further trials of this mode of treatment will produce equally encouraging effects, and I shall take occasion to report to the [Medical] Society [of Victoria] any further experience I may have of it.

The good results obtained by Mr. Gilbee were confirmed a few months later by Mr. J. Rutherford Ryley, M.R.C.S. Edinburgh, Surgeon Superintendent of the Hospital and Surgeon to the Gaol and Lunatic Asylum, County of Westland, New Zealand. Mr. Ryley headed his contribution, "On the Surgical Use of Carbolic Acid" (*Melbourne Medical Journal*, 1868, Volume xiii, pages 107 to 113), and dates it from the Hospital Reserve, Hokitika, February 4, 1868.

On January 14, 1869, J. D. Thomas, M.D., F.R.C.S., surgeon to the Melbourne Hospital, records a case of excision of the elbow joint in a woman, aged twenty-three. The after-treatment consisted in the application of carbolic acid lotion.

On May 7, 1869, Dr. E. Hogarth Pringle, writing from Parramatta, New South Wales, made "a report of surgical cases illustrating the advantage of the use of carbolic acid in compound fractures, etc.":

I have not thought it necessary to give all the minute details of each case, nor have these cases been produced as exceptions, for I have never had a failure where pure acid and careful management have been employed.

Dr. MacGillivray, on the other hand, was less successful, and perhaps more truthful, at Bendigo, where he used a dressing of carbolic

acid and glycerine (one part in three) for a patient suffering from compound dislocation of the ankle.

It is clear, therefore, that the surgeons in Australasia gave a fair trial to these early essays in antiseptic principles. They were hampered by the absence of any bacteriological laboratory, by the inability to obtain the dressings of absorbent wool, hat lining and gauze recommended by Lister, and by want of a scientific training which alone could enable them fully to understand his teaching. At any rate, the Australasian surgeons showed a more open mind than their colleagues in Great Britain, but the results did not justify expectations. The majority preferred to continue on the old lines, and for more than a year nothing more was published on the value of carbolic acid dressings.

In 1872, Mr. W. H. Jenkins, M.R.C.S., assistant surgeon to Her Majesty's Fourteenth and Eighty-fourth Regiments, late resident surgeon at the Hamilton Hospital, wrote "On Some Recent Improvements in Surgery" (*Melbourne Medical Journal*, 1872, Volume xvii, page 40). He gives a clear account of an operation he had seen at the Rutland and Stamford Infirmary in England performed by Dr. Newman under carbolic spray and the subsequent dressing with gauze. Newman was an early disciple of Lister, and had learnt his practice from the master himself. Surgeon Jenkins concludes his article by saying:

On my arrival in Melbourne by the *Asia* at the end of last year [1871], I was much surprised to find that these preparations of antiseptic gauze and macintosh prepared with oiled silk were not to be obtained.

He gave a demonstration of the antiseptic dressings he used which the reporter says was "new to all". As a result of this demonstration, on January 15, 1872, Mr. Gilbee successfully amputated below the knee under carbolic spray.

#### MELBOURNE HOSPITAL.

The Melbourne Hospital rather retarded than accelerated the progress of surgery in the city. Founded in the early days of the colony, and incorporated in 1865, it retained some of the characters of the older European hospitals. Like them, it was supported by subscribers who paid a guinea a year and were entitled to a vote in the election of the staff; unlike them, the honorary staff was elected every four years. There was, therefore, no fixity of tenure, and as a place on the staff was eagerly sought for, abuses crept in. Votes were made, canvassing on a large scale was undertaken, and when there were 4,000 electors, of whom some 1,500 recorded their votes, the expense was serious. It happened, therefore, from time to time that the best choice was not always made, and surgery in the hospital was sometimes of no very high order. The clinical teaching too suffered. There was no medical school attached to the University of Melbourne as late as 1861, and when medical education was undertaken by the University in 1863 no provision was made to enable a professor of surgery to have charge of beds in the hospital. He was dependent, therefore, upon the surgeons

of the Melbourne Hospital for clinical teaching, and he was thus, as I have said, in the same position as was Lister himself when he was appointed Regius Professor of Surgery at Glasgow. Some of the surgeons at the Melbourne Hospital were unable to lecture, some neglected their duty in the wards, and some were constitutionally unfitted to teach. Clinical surgery, therefore, was at a discount for many years. There was no system of apprenticeship nor, outside the town, of partnership. Many students went into practice directly they had graduated and often into remote districts—a system which was good neither for themselves nor their patients.

The Melbourne Hospital soon became too small for the needs of the city, although the Alfred Hospital had been founded and took off some of the pressure upon the beds. Overcrowding took place, sanitary precautions were neglected and hospitalism was rampant. Of five people operated upon in one day in 1885, four died of pyæmia, which is not surprising when the same note adds that "one of the surgeons went straight into the surgical ward after making a *post mortem* examination on a case of pyæmia" (*Australian Medical Journal*, 1885, Volume vii, page 567).

#### CONCLUSION.

There is much more I could tell you. Of the early days of the University; of the struggles of the ladies, first to get taught at all, afterwards to graduate and finally to be admitted members of the Medical Society. Of the time when doctors were content to diagnose "death from apoplexy" when young men died suddenly and no *post mortem* examination would be made. Of a time when it had to be explained in answer to a correspondent that "chloroform is not synonymous with chlorophyll, for the former is the well-known therapeutic agent and the latter is the green colouring matter of leaves". Of a time when an account could be rendered, "to removing forty feet of tapeworm at 6d. per foot, £1". Of a time when the library of the chief medical society was housed in the obscure bedroom of a hospital porter. These times are long past and can never return. Reading about them, I am left with the impression of a pleasant social life in the profession. Good companions for the most part, making rare visits to Europe, partly to cultivate the old relationships and partly to keep themselves abreast of what was new in the world of medicine. When a colleague applied for leave of absence and it was known that he was starting for Europe, a friendly custom grew up of giving him a good send off. The profession met together, for everybody knew everyone in those days, fed him, often gave him a piece of plate as a token of their regard, wished him God-speed and a safe return. On his part, when he came back he called them together to tell them what he had seen and what he had learned, and in this way first-hand knowledge spread with extraordinary rapidity, and what seemed worth trying was tried at once. Such journeys were not infrequent. Fees were high, money was abundant, fortunes were made, and there was a proud record in

1806 that not a single medical man had become insolvent during the year. It was literally the golden age for doctors until the bad times came, banks failed, and the real estate in which they had invested their fortunes became almost valueless. By that time the profession in Australia had come into its own. Books and periodicals were abundant. They had been extraordinarily scarce and difficult to obtain. Medicine became international and surgery in Australasia soon took its proper place.

We welcome no one more gladly at the present time than your young medical graduates who come over for post-graduate study. They are clean-living, keen, active, painstaking, anxious to learn as much as possible during their short stay amongst us, and then to return home to settle. They are courteous alike to the patients and to the seniors under whom they work. These young graduates, of course, are all picked men, and have held responsible positions in your hospitals. They have been taught and perhaps, on occasion, have been "dressed down" by those who, like yourselves, are masters in the world of surgery. We shall regret them very sincerely if the success of this Royal Australasian College of Surgeons lessens the number of such men who come over to Europe.

And so I end with the hope that my little paper will not meet with the neat but devastating criticism made by a French surgeon after hearing an address on a similar occasion. He rose and said, "Monsieur, I have listened attentively to what you have read. There is much that is old and something that is new. Unfortunately, what is old is well known; what is new is not true", and sat down.