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THE EARLY OVARIOTOMISTS–
PIONEERS IN ABDOMINAL SURGERY

WHEN I first embarked on the preparation of this address it was with the idea that Spencer Wells was the key figure in the development of ovariotomy – the operation for removal of an ovarian cyst. Possibly this may be true, but I soon discovered how much credit must be given to other workers in this field.

It all began in 1809. It was in that year that a courageous woman – Jane Crawford – submitted to hitherto untried surgery at the hands of Ephraim McDowell of Danville, Kentucky. Little did they realize the far-reaching results of the "experiment" – as McDowell called it.

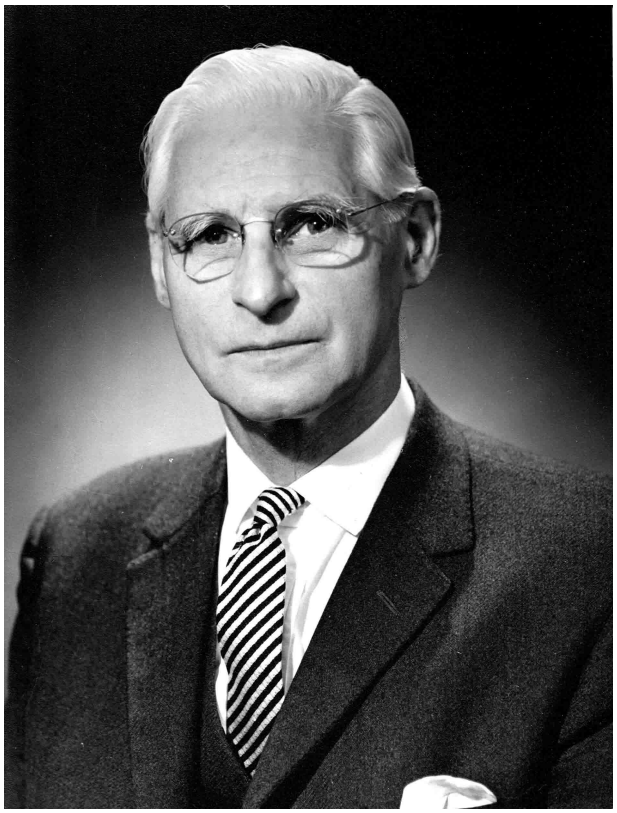
Here is the story in his own words:

"In December 1809 I was called to see a Mrs. Crawford who had for several months thought herself pregnant, with pains from which she could find no relief. So strong was the presumption of her being in the last stage of pregnancy that two physicians requested my aid in delivering her.

"The abdomen was considerably enlarged; examination induced the conclusion that it must be an enlarged ovarium. Having never seen so large a substance extracted, nor heard of an attempt, or success attending any operation such as this required, I gave to the unhappy woman information of her dangerous situation. She appeared willing to undergo an experiment, which I promised to perform if she would come to Danville (the town where I live), a distance of sixty miles from her place of residence. This appeared almost impracticable by any, even the most favourable conveyance, though she performed the journey in a few days on horseback."

McDowell then goes on to describe the operation – an abdominal incision nine inches long was not sufficient to allow removal of the cyst entire, so he partially emptied the cyst and then removed it, leaving the ligature on the pedicle protruding in the lower end of the wound, as was the custom in amputations.

To quote him again, "In five days I visited her, and much to my astonishment found her engaged in



making up her bed. I gave her particular caution for the future, and in 25 days she returned home as she came – in good health which she continues to enjoy." She died 32 years later at the age of 79.

It is difficult for us to imagine the setting of this drama – no anaesthesia (and none for another 20 years), no sterilizing, (the work of Pasteur and Lister was still 50 years ahead), the untried operation, the climate of criticism. One story tells of a mob outside McDowell's house, ready to lynch him for murder, if he failed! In spite of his success McDowell did not publish his report for several years until he had two further successes to his credit. In all he performed the operation 13 times with 8 recoveries.

Though born in Virginia, McDowell is said to have been of Irish or Scottish parentage – Lawson Tait claimed him as a fellow Scot. At any rate it seems certain that he spent about a year of his medical training in Edinburgh returning home in 1795. He soon became a well-known and successful surgeon and his practice extended well beyond his home town. Probably the fact that he had studied in Britain gave him a certain prestige – the traffic now seems to be

in the opposite direction! He was a tall well-built man, strong willed and reliable: of strict religious views, not given to swearing, nor did he permit it in his presence. He died in 1830 at the early age of 59 probably from appendicitis and peritonitis – an irony of fate in view of his contribution to abdominal surgery. In 1879 the Kentucky Medical Society erected a granite monument to his memory, and in 1935 the same Society dedicated a memorial to Jane Todd Crawford – heroine of the first successful operation for ovarian tumour.

No doubt McDowell had thought for some time of trying to remove an ovarian cyst, for he must have heard of the views of people like John Hunter, who in 1785 said ,"if taken in their incipient stage 'hydatids of the ovary' might be taken out, as they generally render life disagreeable for a year on two, and kill in the end. There is no reason why women should not bear spaying as well as other animals." During McDowell's sojourn in Edinburgh one of the prominent surgical teachers was John Bell, who in his lectures spoke of the hopeless nature of ovarian tumours if left alone, and dwelt on the possibilities of removal. McDowell was one of his pupils, and is said to have been "enraptured by the eloquence of his teacher" and it was to Bell that he sent a copy of the report on his first three cases. Bell was ill at the time and died without seeing it, but it fell into the hands of Mr. Lizars, Professor of Anatomy, who in 1825 attempted the operation and published a report on McDowell's cases and two of his own. We hear no more from Lizars on this subject.

Severe criticism followed. The Medico-Chirurgical Review of London in 1825 said "In despite of all that has been written regarding this cruel operation we entirely disbelieve that it has ever been performed with success, nor do we think that it ever will." The Editor later apologised for the earlier misgivings, "for which uncharitableness we ask pardon of God and of Dr. McDowell of Danville."

The next to perform ovariotomy in America was Nathan Smith who operated successfully in 1821, unaware of McDowell's earlier operation. Smith's operation is of special interest in that he cut short the ligatures of the ovarian pedicle, and closed the abdominal wound completely, even though the ligatures were thin strips cut from a leather glove. The two methods of dealing with the ligatures – to cut them short or leave them long – were to be the subject of years of argument. After Lizars, little further interest seems to have been taken in the operation in Great Britain till in 1836 Jeaffreson – a country doctor – reported the first successful operation in England, and there were a few more in the following years.

The main impetus at this stage came from Charles Clay of Manchester, who began in 1842 his considerable series of successful ovariotomies. By 1848 he was able to publish his pamphlet. "Results of Operations in Diseases of the Ovaries by the Long Incision", describing 32 cases, with 22 surviving and 5 explorations without ill results. By 1860 he had 94 with a success rate of 69 per cent. and by 1871 he reported 250 with success in 72.8 per cent. which later rose to 395 patients with 75 per cent survivals. Many of these were done before the days of anaesthesia, and even when it became available he preferred not to use chloroform, stating, "I should infinitely prefer to operate without it, as the patient would bring to bear on her case a nerve and determination to meet so great a trial, which would assist beyond all value the after treatment."

He was an advocate of the long incision, enabling him to remove the cyst intact; he was probably justified in thinking that the 24 inch incision of his first case was a record. His treatment of the pedicle was by ligature, the ends being left long to be led out at the lower end of the wound and later removed when they had separated.

It is rather surprising that Clay had such an uphill fight to establish ovariotomy as a worthwhile procedure, but it seems that his strong personal opinions and what a critic called "his egotism and dogmatic assumptions" may have made it difficult for others to accept his views. It was said of him that he was as skilled in the use of the pen as of the scalpel, and his cutting was not confined to the latter.

In later years Lawson Tait of Birmingham claimed for Clay the title of Father of Ovariotomy as far as Europe is concerned and attributes criticism of Clay's reports to the fact that he was a provincial surgeon. Certainly there seems to have been very little but destructive criticism emanating from London at this time, and Tait wrote "In the provinces, however, many successful cases had been done and the Metropolis was, not for the only time, behindhand." It is also claimed for Clay that he performed the first successful abdominal hysterectomy.

During these earlier years of Clay's activities a few others attempted ovariotomy but with discouraging results and none had his courage in carrying on in the face of criticism. London medical circles frankly condemned the operation as disastrous – the chief critic being Dr. Robert Lee – obstetric physician to the Samaritan Hospital, London. Lee had never seen the operation though repeatedly invited to witness it.

He was unpleasant enough to hint that the matter under discussion "was a money question and not one of science or humanity." He described the ovariotomists as "belly rippers with a B before and a B after", adding "the meaning of these B's I must not state plainly to the Society."

Except for Clay only one other British surgeon – Isaac Baker Brown of London – seems to have taken up ovariotomy seriously from 1850 to 1857. He had been specially interested in ovarian cysts for some years and had tried many treatments, such as tapping, injection of iodine, pressure bandaging, etc., but soon became convinced that surgery would be best. It is said that his first successful ovariotomy (in 1854) was on his sister, his three previous cases having died of sepsis! He was unfortunate in his subsequent cases and seems to have given up the operation for a time. However, Brown is an important link in the chain, for Spencer Wells assisted him in his earlier operations and must have learnt from him something of the technique and difficulties. Wells often quoted Brown's despondent remark to him that "it's the peritonitis that beats us." Baker Brown treated the pedicle by cautery, allowing the stump to fall back into the peritoneal cavity, and in a later series was able to show good results – less than 10 per cent. mortality in 40 operations. His fame as an ovariotomist spread, and his theatre was said to be "One of the most attractive to the professional visitor in all London, admiration being invariably evoked by his brilliant dexterity and the power he displayed in the use of his left hand in certain operations. In cases of prolapsus uteri and fistula, and in fibrous tumours of the uterus he was a master." He was said to be the founder of St. Mary's Hospital, London, and was its first and only surgeon accoucheur. In 1861 the famous French surgeon Nélaton came to stay with him to watch him operate, and on his return to Paris gave a clinical lecture on what he had seen, which led to interest in ovariotomy in France.

This expert gynaecologist, at the height of his fame, was elected President of the Medical Society of London in 1865, but within a year he became involved in a medical scandal which put an end to his professional career – and possibly contributed to his early death. The sad story was well told a few years ago by Professor J. B. Fleming of Dublin in the Journal of Obstetrics and Gynaecology. Brown became obsessed with the idea that the removal of the clitoris would cure epilepsy and hysteria, but advertised his views and his successes so widely that a mass meeting of the Obstetrical Society erased his name from the list of Fellows. He died a few years later in penury. Had he lived longer the success of ovariotomy might have been established much earlier.

It was at this crisis in the history of ovariotomy that Thomas Spencer Wells joined the ranks of the ovariotomists. In 1858 he performed his first successful operations at the Samaritan Hospital, "at a time" he wrote "when few were attempting it, and most men were lapsing into the old state of indifference, if they were not loudly protesting against it." At a meeting of the Royal Medical and Chirurgical Society in 1850 there had been lengthy and heated discussion on the subject, ending in general denunciation, and this attitude still persisted. Wells was not the first to perform the operation in London for a few surgeons had published small numbers of cases, but the results were poor and there was much disagreement about methods of dealing with the pedicle, ligature materials, etc.

The young Wells gained his medical training in several places. In 1835 he went as apprentice to a general practitioner for a year, and then as pupil to a parish surgeon in Leeds. This was a fortunate move, for a medical school had recently been established there and he was thus able to further his medical education. The next year was spent in Trinity College, Dublin. Dublin and Edinburgh were then the great rivals in clinical teaching. His final years of study were in St. Thomas's Hospital from which he qualified M.R.C.S. in 1841, and he was elected F.R.C.S. in 1844 after nomination by the Royal Navy when the College made the extraordinary decision to add a large block of new Fellows without examination. He was later to serve on the Council of the Royal College of Surgeons and as its President in 1882.

Shortly after qualification Wells became a surgeon in the Royal Navy, though the medical branch in those days was held in low esteem by the Service. His first posting was to Malta where he practised the rather limited surgery of his day, took a great interest in pathology, and sent home exemplary reports on sanitation, ventilation of ships, and other aspects of medical care of the servicemen. Altogether he served in the Navy for twelve years, but he had several long periods of leave which gave him the opportunity of visiting Paris and other centres. Ill health – probably pleurisy – caused him to be sent home in 1853 on half-pay, but he seems to have recovered quickly. He commenced practice in London and gave lectures in surgery. In 1854 he was appointed surgeon to the Dispensary of the Samaritan Free Hospital for Women and Children, though he never served on any of the large teaching hospitals.

My interest in Spencer Wells was first aroused

when in 1929 I was appointed House Surgeon in the same hospital which he made so famous and where a marble bust in the hall commemorates his work. Its reputation was still high and I found on the Visiting Staff J. A. Willett of Barts': William Gilliatt, later to be the Royal Obstetrician, and Aleck Bourne, the central figure in the famous abortion trial which he invited as a test case. I was gratified to find also three Queen's men on the staff – McKim McCullagh and Leslie Dodds as surgeons and Dr. Purvis as anaesthetist.

Shortly after his appointment to the Samaritan Hospital, Wells went off to serve as a civilian surgeon in the Crimean War, where he gained useful experience. He had the opportunity of attending to many abdominal wounds, which taught him that the peritoneum could bear rougher handling than he had thought possible. To quote him on this, "I learnt in the Crimea that a man's abdominal wall might be lacerated by fragments of shell, the intestines injured and covered with mud for several hours: and yet that, after cleansing of the cavity and accurate closure of the wounds, complete recovery was possible. When I returned to London in 1856 I was certainly much less afraid than before of abdominal wounds."

His first attempted ovariotomy in 1857 was a complete failure and made him fear "he was entering on a path which would lead to unenviable notoriety rather than to the improvement of professional reputation" and it was only the frequent sight of many women hopelessly suffering, anxious for relief at any risk, which encouraged him to go on.

When Wells began his large series of ovariotomies he pledged himself to report all cases – good or bad – so as to give a fair picture of the results, and this he seems to have done meticulously. In his book on "Diagnosis and Surgical Treatment of Ovarian Tumours" published in 1882 are detailed tables of the results of over a thousand cases. The name of the referring doctor is given in each case and one can see mentioned Dr. Pirrie, Dr. Gordon, and Dr. Ferguson, all of Belfast, Dr. Thomson of Omagh and others from Dublin, Moscow, Berlin, Montreal. He gives an intriguing description of his fortieth patient:

"She was a very young woman, who, in two years' time, had been modelled by her disease into the most perfect type of an ovarian martyr, and who rebounded into health with a rapidity and persistence absolutely marvellous, when relieved from her oppression. Nor has her subsequent career belied the good augury of her vigorous recovery. She married, and bore children, has buried three husbands, and is now in 1882 a promising widow of less than forty years of age."

Like many others his earlier experiences were disappointing; he attributed the loss of one of his first cases to failure to co-apt the peritoneal edges, for he found at post-mortem that the edges had retracted, allowing loops of intestine to adhere to the wound and to one another. Experiments which he undertook on animals proved to him that the peritoneum had to be brought together and that it healed rapidly if this were done. He therefore insisted on the careful closure of the abdominal wound and we still consider this important. By the end of 1862 Spencer Wells had done 50 cases with 33 recoveries. Clay's figures were somewhat better, but it seems that the honesty of Wells' frequent reports carried great weight and gained him support.

It was only after much opposition that he had obtained permission to do this formidable operation in the Samaritan Hospital, for the Committee were greatly influenced by the published criticisms, and were supported in their views by Dr. Robert Lee, physician to the hospital, whose insulting remarks I have already quoted. Nevertheless, in 1860 the hospital report states that 9 cases of ovariotomy had been performed, of whom 7 recovered, a better result than the large London hospitals had produced.

The diet after operation is given in detail in the minutes:

In the first few days beef-tea, arrowroot and brandy are administered every five or ten minutes.

About the eighth day the patient takes fish, light pudding, beef-tea, wine (port or champagne) and brandy – something every quarter of an hour.

In a fortnight the diet is given as follows:

6 a.m.	Tea, bread and butter.
8 a.m.	Breakfast with bacon, and egg beat up in the tea.
9 a.m.	Glass of wine and biscuit.
10 a.m.	Glass of wine and biscuit.
11 a.m.	Meat and bread with wine or bitter beer.
12 noon.	Dinner – meat, with soda-water and brandy.
2 p.m.	Wine and biscuit.
4 p.m.	Tea, bread and butter, with egg beat up in the tea.
5.30 p.m.	Brandy and soda-water.
6.30 p.m.	Wine or brandy, with biscuit or light cake.
8.00 p.m.	Sandwich and bitter beer.

For the night's consumption there is placed in readiness – sandwiches, beef-tea, wine and brandy.

At first Wells followed the usual practice of ligaturing the pedicle with silk and leaving the ends long enough to protrude from the wound, for he feared the effects of putrefaction of the stump if completely closed off. He soon adopted the method suggested by Duffin of leaving the stump itself in the wound, and used a clamp which achieved control of bleeding and held the pedicle at the abdominal wall till it healed. He was probably right not to trust the short ligature for the threads were often septic to begin with, not being sterilized in any way, and often were looped on the lapel of the operator's dirty old frock coat ready for use, though Wells was not guilty of this. This clamp method he followed for many years, with what seemed in retrospect a rather ill-advised obstinacy, for others such as Keith and Lawson Tait were by then obtaining better results with the short cauterized pedicle or short ligature.

He felt it was wrong to do this operation in a large hospital, sensing that there was great danger of what we now know as cross infection, though Pasteur and Lister had still to enlighten the medical world. Every patient submitted to ovariotomy had a room and nurse to herself for a week in the hospital, and yet he found he had better results in the patient's own home. He found that after emptying the hospital for a few weeks, and with thorough cleansing and painting, almost uninterrupted success followed.

The hospital report for 1878 says "for the past year all ovariotomies have been performed antiseptically, with marked diminution in the number of unfavourable results; it may now indeed be truly said that whilst anaesthetics have deprived surgery of its terror, the antiseptic process invented by Professor Lister promises, in cases not manifestly hopeless, to do away with its fatality. We may remark, also, that a large amount of the success of the ovariotomies at the Samaritan Hospital depends on hygienic arrangements scrupulously carried out there. For instance, each patient to be operated on has a ward to herself: and, again, the whole hospital is made practically new every year by being emptied of patients and closed for several weeks, during which it is elaborately cleaned." This is still good practice.

Many visitors from far and near came to watch Wells operate and to hear from him the details of technique and after-care. Among them were famous surgeons from America, France, Germany, who returned home with greater confidence to advance the knowledge of abdominal surgery in their own countries. His activities were not confined to London, for he was soon so well known that he was asked to operate even on the Continent. In 1863 he did a successful ovariotomy in Dublin, claiming later in the Lancet that it was the first success in Ireland, but it seems that Walsh of the Adelaide Hospital had also done a successful case in the same week. Shortly after this publication in the Lancet a Dr. Thompson of Antrim wrote that he had done a successful ovariotomy in 1848 but I don't know of any confirmation of this. I do know that McMordie of the Samaritan Hospital, Belfast, reported three successful cases in 1886.

In the hospital minutes of 1872 we find a grant of £10 to Mr. Wells "for a stage for the purpose of allowing Visitors, and especially Foreigners, to witness his operation." Before entering the theatre visitors had to sign an undertaking that they had not attended a post-mortem examination, nor any dissecting-room, nor attended any case of infectious disease during the last seven days." It seems that the teaching of Semmelweis had not been in vain. Possibly the stage was also to a certain extent intended as a barrier, for at this time the surgeon was often jostled by visitors, who even trust an unwashed hand into the abdomen in their interest. Talking was also discouraged. I wonder if some of you remember Andrew Fullerton's reproof "in the summer I have no students and no talking – and less sepsis."

In Wells' writing one cannot help being impressed by his deep study of all aspects of the problem. He was largely responsible for teaching the means of examination by which ovarian swellings can be distinguished from pregnancy, phantom pregnancy, and free fluid, so that his records show few mistaken operations. For a while many believed that the cyst should not be removed until it caused considerable distress and had interfered with the patient's health; it was maintained that the anaemic patient had less bleeding: that the greater the distension of the peritoneum by the cyst the less liable it was to traumatic peritonitis, and if she had become somewhat emaciated the abdominal wall was able to be closed more accurately. Later experience altered these views.

It is rather surprising to read that "it by no means follows that the state of robust health is one so favourable for operation as that of a patient more or less accustomed to the quiet and habits of a sick-room." He was very conscious of the responsibility of recommending an operation necessarily associated with serious risk of life, and goes on to list various moral, mental and social factors which may influence the decision. A long list of general diseases which would contraindicate operation is also given but we read that "the mere

presence of albumin in the urine has often had undue weight. It is often of no more importance than in pregnancy, and disappears after the pressure of the tumour ceases." The present day obstetrician would hardly treat this so lightly.

Retirement from the Samaritan Hospital in 1877 did not mean retirement from surgery, for he was busier than ever, and in 1890 reported the astonishing total of 1,230 completed ovariotomies with a mortality of only 4.4 per cent in his last 259 cases. At this time he extended his surgery to hysterectomy and removal of the kidney and he reported in 1888 a successful splenectomy – he had operated in the belief that it was an ovarian cyst with a long pedicle.

Many honours were given him – a baronetcy, appointment as Surgeon to the Royal Household, and with Simpson and Syme of Edinburgh he received the Fellowship of the King and Queen's College of Physicians of Ireland. As his prosperity increased he bought a small country estate at Golder's Hill, near Hampstead, where he entertained on a generous scale. He was a familiar sight for many years, driving his carriage and pair from his home to his rooms in Upper Grosvenor Street – every inch the successful surgeon, confident orator, and leader of his profession. He died in 1897, more fortunate than many pioneers in that he had lived to see the fruits of his labours.

Between 1862 and 1872 excellent results were being obtained in Edinburgh by Thomas Keith (1827-1885). He had been earlier apprenticed to Simpson – famed for his introduction of chloroform to obstetric and surgical practice. Keith did most of his operations in a small private hospital but he was later appointed "extra surgeon for ovariotomy" to Edinburgh Royal Infirmary in acknowledgement of his special skill.

He was a quiet man, dogged by ill-health and not much given to debate or publication. He seems to have been a most able diagnostician for his reports show few unfinished operations and few mistakes in diagnosis. It is reported that he successfully removed a cyst of 120 lbs. weight. In 1872 he was able to report a success rate of 81.6 per cent. in 136 operations – the best results in Europe. He later moved to London where he had several years of professional collaboration with his friend Spencer Wells.

In his earlier years he treated the pedicle by exteriorising it in a clamp but with a mortality of about 20 per cent. so he says he took to Mr. Brown's cautery method "in a sort of despair." "For a time it was used irregularly, and only in the worst cases, or in those not favourable for the clamp. The result of the first fifty cautery cases, published in the Lancet, gave a mortality of less than one in twelve and the results that followed were much better." Later his mortality was under 4 per cent. In his method the stump was grasped in a clamp which was screwed tight and then heated by repeated applications of the cautery iron. This went on for about 20 minutes so that bystanders often thought him unduly cautious, but it resulted in a pedicle which was dry as parchment. The great advantage over the clamp was that the abdominal wound could now be closed completely in most cases, though Keith attributes much of his success in severe cases to the use of glass drainage tubes. Later he followed Lister in using carbolised catgut ligatures.

A point which he stressed in his technique was the careful removal of all blood from the peritoneal cavity, for he had had the unfortunate experience of gross infection of retained blood. Many still held the view that rapid operating was the key to success, with minimum exposure of the peritoneum to air, and that the risk was increased by spending time on such a procedure as "the toilet of the peritoneum" as it came to be called. Keith's major contribution was his advocacy of the intra-peritoneal treatment of the pedicle – not generally adopted for many years.

Spencer Wells had been operating on ovarian cysts for 14 years when in 1872, at a discussion in London, an appeal was made for other surgeons to contribute their experiences. By this time Wells had completed 500 with 20 per cent. mortality. It was in answer to this appeal that a new star appeared, in the person of Lawson Tait of Birmingham. He reported 9 cases of ovariotomy with 8 recoveries.

Born in Edinburgh in 1845, he was educated at Heriot's and seems to have obtained a scholarship to the University at the early age of 15 years, though he did not take the university degree. He qualified L.R.C.S., L.R.C.P. Edinburgh in 1866 and a year later, after visiting Dublin and other centres, he became House Surgeon in Wakefield Hospital.

During his student days he was well known as one intolerant of authority and of the didactic teaching so common in his day, and his sympathies lay with those like Darwin who were questioning the accepted concepts of medicine and science. He frequently joined in discussions on these matters and developed a skill in debate which lasted all his life. He dearly loved a fight and was to be found as a partisan in every argument, as shown in his very long letters to the Lancet and other publications, and his frequent contributions at medical society meetings.

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It was at Wakefield, in 1868, that Tait first performed ovariotomy, when he was 23 years old, and he repeated it four times in the next 2 years. In a way, it was rather extraordinary that he should have done so, for at the time of qualifying, he expressed "a firm resolve not to deliberately open the abdomen."He had been shocked by the many bad results which he had seen as a student.

In Edinburgh, he conceived a great regard for James Syme, one of the most famous surgeons of his time, and there is little doubt that the example of his teacher made a lasting impression. Tait has described him thus: "always perfectly dressed in his old fashioned way and as clean as a new pin. He was always washing his hands; his assistants had to be like him, and his nurses were noted for their tidiness and cleanliness." "At operation he always turned up the sleeves of a dress coat in which he might, before the operation, have appeared before his Queen." This was in contrast to the methods of most other surgical units, where the theatre was a shambles, and the wards reeked of suppuration and gangrene. He talks of the awful things he saw in his six years of pupilage when even the simplest operation was followed by suppuration and, as a French doctor put it "a pin prick is a door open to death." It required some courage therefore for the young surgeon to attempt an abdominal operation, though he must have known of the work of Clay and Wells, for he followed Wells closely in technique. He lost only one of his first ten cases.

He moved to Birmingham in 1870, remarking that it was the centre of England, and if a man became well-known he could be called on more readily than from London. It was not long before he became well-known, not only in Birmingham, but far outside it. He founded the Hospital for Women, and lived next door to it for many years, so that he could more readily attend his patients. In spite of his busy practice he found time to write an essay on "Pathology and Treatment of Ovarian Diseases" for which he was awarded the Hastings Gold Medal of the British Medical Association in 1873. This publication did much to establish him as an authority on the subject and he embodied it in a text book on Diseases of the Ovaries which he wrote in 1882.

His early success with ovariotomy was not sustained, for he had the fearsome mortality of 19 in his first 50 cases or 38 per cent., while Wells had a steady mortality of 25 per cent. Tait had used the carbolic spray and other precautions laid down by Lister and so he doubted the claims made for the new antiseptic technique and said so in his usual downright way. Keith had achieved good results without it and Tait concluded that the intra-peritoneal treatment of the pedicle was what mattered and that he had been wrong to follow Wells in using the clamp and extra-peritoneal fixation technique: "my results with it were so bad that its employment will ever be to me a matter of bitter and lasting regret."

In abandoning the Lister antisepsis he remembered the care taken by Syme and by Keith to have everything as clean as possible – using boiling water to cleanse his instruments and to soak his ligatures: he had come to develop a large measure of asepsis – a logical outcome of Pasteur's and Lister's work, but to the end of his days he denied this influence.

In his chapter on ovariotomy Tait expresses himself strongly on the spread of septic infection: "for any surgeon to perform an ovariotomy while he is engaged in dissection or in the performance of post mortem examinations, or while he is attending any case from which he may be likely to convey septic infection, should therefore be looked on as a professional offence of the gravest kind." He feared that antiseptics could be looked on as "a royal road to success, as a something which puts the skilled and competent on a level with the inexperienced and incompetent: an antiseptic spray will not condone the want of manipulative dexterity or the absence of readiness in emergency." By the end of 1882 he was able to report 101 cases with only three deaths, so he felt he was now on the right lines.

Encouraged by his success in abdominal surgery for ovarian cysts he turned his attention to surgery for other conditions and for a time removed bilateral cystic ovaries for the control of excessive menstruation associated with myoma of the uterus: he even removed them for dysmenorrhoea and epilepsy. His next advance was to remove the chronically infected Fallopian tube and ovary – a potent cause of chronic ill-health right up to the antibiotic age. I have a clear recollection of operating on many such cases, with the satisfaction of seeing a remarkable return to health, but Tait met amazing opposition to this innovation, particularly in London.

Lawson Tait was the first to operate on the recently ruptured ectopic pregnancy. It is almost incredible to us that prior to 1883, a woman who was so unfortunate as to sustain a ruptured tubal pregnancy was left to die of internal haemorrhage. Though he lost his first patient he learnt from that experience that the first essential was speed in getting to the site of rupture to control bleeding. He

continued to operate on all cases he was called to – in five years 42 operations with two deaths. Howard Kelly wrote in 1912: "conquest of this malady was one of the most brilliant achievements of the last century."

Not content with his conquests in the pelvis this brilliant and progressive surgeon went on to drain the gall bladder, to open hydatid cysts of the liver and to operate on the kidney. Here is his credo at this stage in his career: "For my own part, so fearless am I now of abdominal surgery, so splendid have been my results in fields of practice which, until three years ago, seemed hopelessly enclosed, that I venture to lay down a surgical law, that in every case of disease in the abdomen or pelvis, in which the health is destroyed or life threatened, and in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made." What a change has come over the scene since McDowell's operation in Kentucky.

So we come to the beginning of a new century – and a new era in abdominal surgery. The torch was taken up by men like Bland Sutton, Comyns Berkeley and Victor Bonney. While greater safety permitted more radical surgery, paradoxically enough it also encouraged conservatism in pelvic surgery, enabling vital organs to be restored more or less to normal by the excision of non-malignant tumours of the uterus or cysts of the ovary. I would like to underline this for any of my younger colleagues who may find themselves in doubt about the treatment of the unexpected cyst of the ovary. My advice is to leave it if you don't know how to do a conservative operation – it can be dealt with later if necessary – the ovary can't be replaced – not even to-day!

No one man can be given the credit for these advances: we all climb on the shoulders of our predecessors.

The future of gynaecology is unlikely to lie in further great advances in abdominal surgery, but we will still have to rely on it for relief in many diseases, and countless women must be grateful to these pioneers – the ovariotomists. I am naturally enough rather prejudiced in their favour, but I would like to close with the remarks of the famous physician, Sir William Osler, a few years before his death:

"Perhaps as specialists no class in our profession has been more roundly abused for meddlesome work than gynaecologists, yet what shall not be forgiven to the men that, as a direct outcome of the very operative details that have received the bitterest criticism to-day, are saving lives that otherwise would have inevitably been lost. It has not always been professional encouragement that has supported them during advances on special lines, but humanity owes a great debt of gratitude to those devoted men that have striven during the last half century for exactness in knowledge and for practical application of such knowledge – a debt too great to pay; too great even to acknowledge."