

Three Ulster Surgical Gentlemen

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Fig 1. Alastair L Macafee



Fig 2. CG Lowry ("CG") Portrait painting by Sir James Gunn 1945



Fig 3. CHG Macafee ("Mac")

This article briefly describes the professional lives of three Ulster surgeons. Alastair Macafee was a consultant Orthopaedic Surgeon at the Ulster, Musgrave Park and Ards Hospitals for many years (Figure 1). His grandfather CG Lowry and father CHG Macafee were Professors of Midwifery and Gynaecology in Belfast spanning 43 years from 1920 to 1963 (Figures 2 and 3). This article provides a snapshot of their surgical contributions to medicine and provides some historical references which remain relevant to our profession today.

CHARLES GIBSON LOWRY – "CG"

Charles Gibson Lowry, "CG" for most of his professional life, was the eldest son of a Limavady farmer. Once qualified, CG started in General Practice but later decided to forge a surgical career, and was appointed Assistant Gynaecologist at the Ulster Hospital for Children and Women in 1908.

During the 1914-18 war he looked after some of the casualties returning from France and trained in the "no touch" surgical technique in Liverpool under Sir Robert Jones (1858-1933), one of the early pioneering Orthopaedic Surgeons. This experience fueled his determination to obtain the FRCS, achieving top marks in the FRCS exam in 1918, despite a busy consultant practice. CG would regularly return to Liverpool to learn the art of gynaecology from Blair Bell who was one of the doyens of gynaecology at the time, and

in 1920 he was appointed Professor of Midwifery at Queen's University. His main contributions from this point were fourfold: marked reductions in maternal mortality rates, the training of doctors and nurses in the art of obstetrics, the building of the Royal Maternity Hospital in Belfast and being one of the founders of the Royal College of Obstetricians and Gynaecologists in London (RCOG)¹.

THE ORIGINS OF THE ROYAL MATERNITY HOSPITAL, BELFAST ("RMH")

Unacceptably high maternal and fetal mortality rates were causing great concern in the early 1920's at the maternity hospital in Townsend Street (Table 1). The maternal mortality rate in 1925 was 4.4 per 1000; 150 women per year died in pregnancy and childbirth which represented three women a week and one tenth of all deaths in women between ages 20 and 45 years².

Antepartum haemorrhage ranked fourth as a cause of maternal mortality and to tackle this and other maternal issues, CG and Dr Tommy Holmes commenced Antenatal Clinics, and appointed CHG Macafee as tutor. In the first nine months,

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the maternal death rate from placenta previa fell to 12% and in the next three months, 6%. By 1944, it would be 0.57 %.

TABLE 1:

Maternal death rates in Northern Ireland

Macafee CHG. The history of the chair of Midwifery and Gynaecology in the Queen's University of Belfast 1835-1945. *Ulster Medical Journal* 1975;44:93-115.

Year	Mortality (%)
1922	14.4
1923	18.7
1924	12.1
1925	6.0
1926	1.1

This improvement further stimulated CG to try and improve the education of health professionals and the environment for expectant mothers. He increasingly recognised that having the care of women disparate from other specialities was unwise. To save lives, you had to have all the available specialties close at hand. His vision was a Maternity Hospital on the Royal Victoria site. Additionally, medical students were at that time traveling to the Rotunda Hospital in Dublin to get their obstetric experience – whether he wished to ensure education in house or to reduce the well recorded Guinness excesses is unclear. He was not “easy” on his students and demanded the highest qualities from them. Table 2 lists some of his classic comments.

TABLE 2:

Advice to students from CG Lowry

- Men make mistakes not because they don't know but because they don't look
- A sound knowledge of medicine and avoidance of a narrow focussed approach to any specialty
- An MD is a check on idle habits
- The young man who has the goods will always get a market for them. Some men will find their markets sooner than others but the man who has the goods to sell cannot be kept indefinitely in the shade

To succeed in his vision of a new maternity hospital, he required land, political support, money and the backing of his consultant colleagues. The Belfast Corporation allocated a free site of five acres near the Royal Victoria Hospital which solved one problem.

Lord Dufferin (b 06/04/1909 d 25/03/1945), the 4th Marquess and speaker of the Northern Ireland Senate, before a trip to Canada asked CG where to visit to see the best maternity care. CG, following his own visit to North America in 1926 recommended Toronto. On their return a journalist asked Lord Dufferin for a comment on his trip. “Belfast should be ashamed of its City Hall, he said”. When the astonished reporter enquired why, Lord Dufferin replied “A city which

has a maternity hospital like Townsend Street should be ashamed of such a wonderful City Hall”,².

The path to integrating maternity services into hospital care did not run smoothly however. In 1927, senior physicians dismissed the matter of amalgamation by postponing the decision for a further year. CG reportedly responded privately by saying: “I always knew that physicians were only interested in Obstetricians when their wives were having babies, now they are all past that”². Of note however was the continued support of the Professor of Medicine, Professor James Lindsay.

In the Appeal for money to fund the Maternity Hospital, CG made a presentation in the City Hall and, having enunciated all the reasons, he made these three significant statements:

- “The success of all great causes requires money and an enlightened public opinion.”
- “A hospital is a hospice for those who need help and secondly a centre for education.”
- “I can imagine no better memorial to a mother than a good Maternity Hospital.”

The Royal Maternity Hospital (RMH) finally opened in 1933 and this plaque in recognition of his efforts still stands there today (Figure 4).



Fig 4. Memorial to CG Lowry, Royal Maternity Hospital, Belfast

THE ROYAL COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS (“RCOG”)

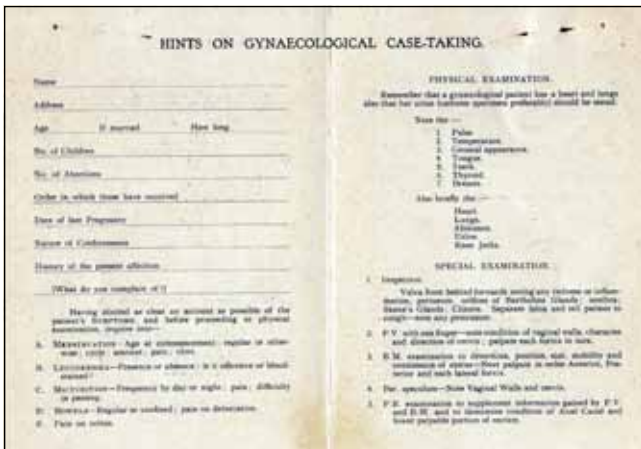
His association with Blair Bell (1871-1936) helped in the formation of the Royal College of Obstetricians and Gynaecologists (RCOG) in 1929. They believed that only by having a college devoted entirely to the practitioners of their art, could any general raising of standards be achieved. His was one of the nine signatures to the document submitted to the Board of Trade. CG would subsequently become a Vice-President.

Other activities outside of Ulster included eight years as the Crown nominee for Northern Ireland on the General Medical Council. He was an external examiner at the University of Glasgow and an honorary president of that city's Obstetrical

and Gynaecological Society³. He also gave a Presidential address to the Ulster Medical Society on “The problem of uterine cancer” in 1933⁴.

TABLE 3:

CG Lowry Hints on Gynaecological Case-Taking



Despite all these other activities, he remained a prolific and renowned teacher of the art of obstetrics till his retirement. He ensured there was a lecture theatre in the RMH so that trainees could still attend teaching despite being on labour suite. He published “Hints on Gynaecological case-taking” which were given to local GPs and to students (Table 3). Figure 5 is taken on his last day pre retirement, in theatre in 1945. His obituary, written by a General Practitioner (Dr Hall Stewart), reaffirmed that he brought a sense of security and courage when dealing with clinical and professional challenges while administering firm rebukes if circumstances demanded it or work was substandard. He had few equals as a teacher and his many aphorism remained with those he trained throughout their careers. He had “ the gift of imparting knowledge in a simple way, and was ever ready to help any student or young doctor who was willing to work”⁴. His recognition and understanding of a patients perspective and “his outstanding ability as a surgeon, combined to make him the ideal consultant that he was acknowledged to be”⁴.



Fig 5. CG Lowry after his last operating list pre retirement in 1945

CHARLES HORNER GREER MACAFEE (“MAC”)

CHG Macafee, a son of the manse, graduated from Queens with first class honours in 1921, obtained the FRCS in Dublin and London and was appointed to the chair in Midwifery in 1945, holding it for 18 years. Figure 6 shows the two men joining an esteemed gathering of the Gynaecological Visiting Society at Oxford in 1945.



Fig 6. Gynaecological Visiting Society of the Royal College of Obstetricians and Gynaecologists, Oxford 1945

Back Row: Unknown, Alan Brews (*Spectacles*), Arthur Bell, Joe Wrigley.

Middle Row. From left: Eardley Holland, Bethel Solomons, Dan Dougal, Unknown, Roques, Gibberd (*spectacles*), Strachan, Gemmell, R.W.Johnstone, Gilliatt, Claye, Charles Macafee (“MAC”), Fahmy, Unknown.

Front Row: Charles (CG) Lowry, Munro Kerr, Miles Phillips, Comyns Berkeley, Chassar Moir, Gough, Farquhar Murray, James Young, Fletcher Shaw.

Professionally known as “Mac” through his career, CHG’s contributions to medicine included introducing expectant management for placenta previa (in which he became the world expert) which helped in reducing maternal mortality in Belfast and providing a specialist practice for radical resection of vulval cancer⁵. He also published papers on ovarian tumours and intestinal endometriosis⁶⁻⁸. He became Vice President of the RCOG, was awarded a CBE, an Honorary DSc from the University of Leeds and later became the Queens’ Deputy Lieutenant for the County of Down. He married CG’s daughter, Margaret Crymble Lowry and had three children: CA Jeremy Macafee (FRCS, FRCOG), Alastair Lowry Macafee (FRCS) and Anne G Macafee (RCN; later Mahood).

PLACENTA PREVIA

In 1937, the three obstetricians at the RMH focused their energies on one common obstetric emergency each. Mac chose antepartum haemorrhage (APH). At that time it was the fourth commonest cause of maternal mortality and carried a fetal mortality rate of 59%. Placenta praevia was the commonest cause; an APH was considered an emergency and urgent delivery recommended whether at home or in hospital. The high fetal mortality was generally secondary to prematurity (Table 4). Mac was a great listener to his patients and realized that the majority of women had already had bleeding before presenting but had not attended hospital

or told their midwives. Thus he saw a possibility of trying to help babies reach a more reasonable maturity as close to 38

TABLE 4:

Comparing obstetric death rates from antepartum haemorrhage between 1932 and 1944: Royal Maternity Hospital (RMH) and within UK and Ireland

- a Berkeley C The Journal of Obstetrics and Gynaecology of the British Empire 1936: Pg 393
- b Macafee CHG. Placenta previa - A Study of 174 cases. The Journal of Obstetrics and Gynaecology of the British Empire 1945;LII(4): Table 1 Pg 314

Year	Total number of cases	Maternal Mortality (%)	Foetal Mortality (%)
UK and Ireland 1936a	4580	7.0	59.0
RMH 1932-36b	76	2.6	51.3
RMH 1937-44b	174	0.6	23.5

weeks as possible, despite haemorrhage.

His seminal paper published in the Journal of Obstetrics and Gynaecology of the British Empire was important in several areas⁹. It was not only the largest published series of its kind (173 cases) but at that time there was a very fixed mindset to the management of placenta previa. So, to overcome this and to achieve such marked and rapid reductions in fetal mortality rates was incredible. Expectant management became the standard. This paper remains seminal¹⁰.

The importance of educating his junior team cannot be overestimated - 42% of the maternal or foetal deaths occurred in the first two years when "cooperation between senior and junior trainees was "least satisfactory". Table 5 highlights the difference between the first and last 47 cases. What is even more exceptional is table 4 of the results section – this seminal work on placenta previa. Table 5 reproduces this in part and makes the extraordinary statement regarding medical "error of judgement". How refreshing to see such honesty in a scientific paper.

TABLE 5:

Birth weights and foetal mortality rates in the series

Macafee CHG. Placenta previa - A Study of 174 cases. The Journal of Obstetrics and Gynaecology of the British Empire 1945;LII(4): Table 3 Pg 316

Year	Average birth weight (pound, oz)	Foetal Mortality (%)
1937 – 39		
First 47 cases	5lbs 2 oz	47
1943 – 44		
Last 47 cases	6 lbs 12 oz	6

There were drawbacks to this expectant management. Women remained in hospital for extended periods - the longest stay was 14 weeks; one patient having 9 APH's before she delivered her baby safely. He would later revise his views in a Lancet article in 1960, having been the Sims Black Travelling Professor for the RCOG to Rhodesia and South Africa. He recognised that management would have to alter in parts of the world where distances were great, access to medical staff and transfusions services were limited or where patients were less compliant¹¹⁻¹³.

SUBSPECIALTY GYNAECOLOGICAL CANCER SURGERY



Fig 7. Robert Campbell Oration Medal - CHG Macafee

He was a skilled surgeon and up to his retirement performed almost all the radical vulvectomies in the province. He had been inspired by the RCS Hunterian Lecture of Mr Stanley Way in February 1948. Way, who graduated from the Middlesex in 1936 (FRCOG 1953, FRCS 1974) was an Honorary Consultant Gynaecologist working in Gateshead, Tyne and Wear. Way was also Lecturer in Gynaecological Pathology, Newcastle University, an Honorary Fellow of the American College and a UK leader in the field of Vulval Cancer¹⁴⁻¹⁶.

Mac would later encourage tertiary referral to his team at the Royal Victoria Hospital. Surgery was performed by Mac, initially with the aid of Eric McMechan (his general Surgical colleague) and latterly purely by his own gynaecology team⁵. The sizeable resection specimen involved an anterior incision beginning at both anterior superior iliac spines with deep and superficial nodal clearance. His nursing team reported back that split skin grafting left such a painful donor site that it should be avoided. The large wound therefore healed by secondary intention apparently without significant septic complications which was testament to the nursing care received. He would avoid division of the inguinal ligament, rather he would dissect it off the pubic tubercle which gave good exposure to the femoral canal and then reattach it to the periosteum of the anterior ascending ramus at the end of the procedure with a much lower femoral hernia rate than ligament division. He left the femoral vessels exposed rather than using a sartorial flap to cover them but did have one fatal haemorrhage in the series.

Figure 7 features the Robert Campbell Oration medal presented to CHG in 1963 by the Ulster Medical Society¹⁷. He reminded the audience that "when humanity is lost, medicine

is not a noble career". And he highlighted that the motto on the back of the medal reads "Where there is love of humanity there is love of the art"

ALASTAIR LOWRY MACAFEE

Alastair Macafee graduated from Queens' University, Belfast in 1958 and remained fascinated by medicine throughout his career. Those that worked with him in the early days described him as an outstanding Houseman who demonstrated his dedication to his patients and support for his colleagues.

He became a tutor in Pathology and undertook an MD, studying the relationship between blood group and Type 1 diabetes under Professor Sir John Henry Biggart. Post FRCS, he began his surgical training culminating in a Consultant Trauma and Orthopaedic post based out of the Ulster, Musgrave Park and Ards Hospitals. He would hold this position until 1995.

TABLE 6:

Extract from paper highlighting "errors of judgement"

Macafee CHG. Placenta previa - A Study of 174 cases. The Journal of Obstetrics and Gynaecology of the British Empire 1945;LII(4): Table 4 Pg 319

1938	1 Willett's forceps applied Type III. Error of judgment. 1 version: child could not be resuscitated, although heart beating. 1 A.R.M. and Willett's forceps. 1 intrauterine death. 3 premature.
1939	1 prolapsed cord and version. 1 version done unnecessarily. 1 cord inserted at lower edge placenta. Baby died following 5th haemorrhage. 1 breech, foot extracted.
1940	1 velamentous insertion of cord, one vessel ruptured during A.R.M. 1 battledore insertion of cord at lower edge of placenta. Willett's forceps applied, and later found to have caught cord. Error of judgment.

ORTHOPAEDIC PRACTICE

His orthopaedic interests were in hip replacement and traumatic injury to joints. He arrived at the Ulster Hospital at a time of increasing expansion in fracture fixation methods for long bone and joint injuries. He was a student and proponent of the Swiss AO Group for rigid internal fixation¹⁸. He believed passionately in the aforementioned "no touch technique" which he used in the placement of all his total hip replacements, of which he did over a thousand. All of his operations were carried out without putting a finger in the wound. It is believed that his infection rate was very low but data is awaited to support this. To see him reconstruct a shattered elbow was to see a true craftsman at work¹⁸. The theatre staff looked up to him with reverence and respect.

He published several articles on a wide variety of orthopaedic

conditions ranging from fractures of the femoral neck, cervical spine injuries in schoolboy rugby football to intraoperative local anaesthetic infiltration after lumbar discectomy¹⁹⁻²¹. The Musgrave Park results were as good as internationally published data at the time²².

MANAGEMENT ROLES

He served as medical director at both Musgrave Park and the Ulster Hospitals and also as Chairman of Staff at the Ulster. He found this aspect challenging but brought great experience and wisdom to the post; acting as a wise broker between management and medical staff⁸. He helped secure the building of the Hospital church at the Ulster where he hoped patients, relatives and staff could find solace and comfort through dark and difficult times. He was Vice Chairman of the Board of Governors at Bangor Grammar School for many years and, latterly, President of both the North of Ireland Medico-Legal Society and the Irish Orthopaedic Association. Although he dedicated himself to his profession he was foremost a family man. Figure 8 summarises the Macafee and Lowry Family tree.

When he ceased surgical practice, he greatly enjoyed medico-legal work

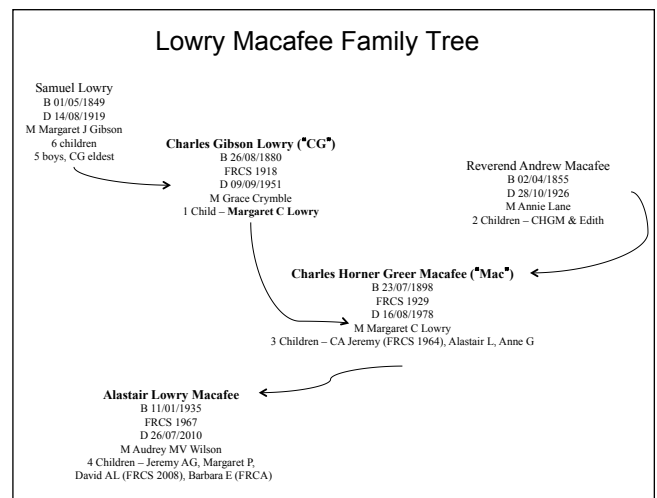


Fig 8. Lowry Macafee Family Tree

which provided an ongoing contact with patients. He enjoyed listening and diagnosing problems and was often teased by staff for thanking patients for attending his clinics. He was a role model of professionalism and courtesy. To his fellow surgeons, Alastair was a gentle giant of a man, an easy friend and a great colleague. He leaves a professional legacy which is one of surgical craftsmanship, a model in commitment to patient care, and honour and grace to all his colleagues (18).

A few further quotations I think sum up his whole ethos towards medicine:

- "Sail with a low sail," or "Put your head in the fetal position because, if you don't, someone else will put it there."
- "Keep your education broad, always remain a student, always copy your betters and seek for perfection, and a happier and better man you will be"

- “The good physician treats the disease; the great physician treats the patient who has the disease.”²³
- “Be natural, be kind. Leave your patients if not in better health at least in better spirits.”²³

CG Lowry and CHG Macafee lived in extraordinary times for medicine. There was so much potential for improvements in mortality; rapid technological advances; and such enthusiasm amongst the leaders of medicine – setting up the RCOG, improving outcomes, sharing experience internationally. Alastair Macafee was also a surgical gentleman with a great love of humanity. He leaves no large institution as a legacy but he had a passionate sense of purpose, and ideals just as strong as that of his predecessors. He inherited his father’s approachability, sense of calm and gentleness. Personally, what I have learnt from reviewing the professional lives of these three great men is that to achieve and maintain the highest of professional standards, you need to:

- have good clinical acumen and medical knowledge
- work hard
- collaborate with other experts
- challenge the accepted norms or those who wrongly impede progress
- uphold the finest traditions of our profession – honesty, integrity and humanity

What these three Ulster surgical gentlemen had in common was the sentiment that whilst medicine is undoubtedly a science, it deals with people and not things.

CONFLICTS OF INTEREST:

The author is the son of A L Macafee and hence a direct descendant of all three surgeons. However, the data presented is from peer reviewed journals and the article has been independently peer reviewed. The author has received educational support from Ethicon Endosurgery during his surgical training but there is no link with this historical article. The author has no financial, political or other intellectual conflict of interests.

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