

Sir Archibald McIndoe and the Guinea Pig Club

BY JACQUIE PINNEY & ANTHONY D METCALFE

The early life of Sir Archibald McIndoe

Archibald Hector McIndoe was born in Dunedin, New Zealand on 4th May, 1900. His father John was a printer and mother Mabel an artist. He was the second eldest child of four children. His father John died when Archibald was just 15. His strong minded mother Mabel took it upon herself to make sure her children were given solid guidance and support to make sure they strived to achieve without a father figure. Archibald attended Otago Boys' High School and later won a scholarship at the University of Otago to study medicine. After his graduation he became a house surgeon at Waikato Hospital but he was already having thoughts as to how he could get to England in order to receive further training that would enable him to become a better surgeon.

The opportunity to develop his skills came through a different route. Will Mayo (one of the founders of the American Mayo Clinic) visited the Otago Medical School and whilst there offered a fellowship to McIndoe. Just before McIndoe departed by boat to San Francisco he married Adonia Aitkin but unfortunately couldn't take her with him as the fellowship rules wouldn't support her as well.

A move to America and the Mayo clinic

Archibald spent five years at the Mayo starting as First Assistant in Pathological Anatomy, publishing several papers on chronic liver disease. His wife Adonia eventually joined him, found work in the Mayo Pathology department and then later playing piano in the hotel opposite. Ironically, Adonia earned a better wage than Archibald doing this!

After his fellowship, he became assistant surgeon and developed a new surgical procedure for dealing with carcinomas on the liver (Figure 1). In 1930, whilst demonstrating the new surgical technique in Chicago he



Figure 1: A picture of Archibald McIndoe during his time in America.

received a call to ask if he could carry out abdominal surgery on a patient. The only stipulation was that the patient, Mr Mancini, required complete discretion and would pay a fee of at least five times the expected rate.

A fleet of Cadillacs brought Mancini to the hospital and after successful surgery, he was whisked away despite having not fully recovered. As his entourage left, one of the men said, "Al told me to say thank you for all you did for his kid brother" and handed McIndoe an envelope containing \$1,000. Sir Archibald had just operated on the younger brother of infamous gangster Al Capone.

Also present at the Chicago surgical demonstration was Lord Moynihan, President of the Royal College of Surgeons of England. Moynihan remarked: "You have hands like a ploughboy, my boy, but they behave like

an artist's, sit down and tell me about yourself." Lord Moynihan convinced McIndoe that England was the place he should be to further his career and that he would line a job up for him.

Life in England

The McIndoe family arrived in Liverpool in the winter of 1931 and travelled to London to find out that things were not to be quite as he had been promised. When McIndoe finally met Lord Moynihan, Archibald pointed out that he was in London because of the job he had been offered. Moynihan looked incredulous and stated: "Bless my soul, the hospital isn't even built yet, I can hardly give you a job if the place doesn't exist can I?"

Moynihan dismissed Archie's claims and suggested that he apply for a Royal College of Surgeons (RCS) fellowship before anyone would consider him for



Figure 2 : Mr Rainsford Mowlem, Prof TP Kilner, Sir Harold Gillies and Mr Archibald McIndoe.



Figure 3: The first meeting of the Guinea Pig Club, July 20th 1941.

surgical work. Archibald wandered the streets of London wondering what had happened, having travelled from such security to find nothing but adversity for his and his family's future.

He began work on his RCS fellowship and found a new mentor in a distant cousin in London, Sir Harold Gillies, a highly regarded plastic surgeon who had transformed the practices of surgery during the First World War. Gillies turned out to be both a great host and sympathetic listener who secured work for Archie at St Barts Hospital, whilst giving him opportunities to learn about the procedures of plastic surgery.

From 1932 until 1939, McIndoe assisted Gillies, and refined the surgical skills necessary for what was to follow. As time progressed, McIndoe's surgical prowess and reputation grew and he managed to start his own practice

and reap the rewards of his years of dedication. He aimed to put in 10 busy years of work then take a more relaxed pace and enjoy the material benefits afforded by his work. The worsening political situation in Europe, however, changed all of these plans.

World War II brought a new era in plastic surgery

At the outbreak of WWII there were only four fully experienced plastic surgeons in Britain: Gillies, McIndoe, Rainsford Mowlem and TP Kilner (Figure 2). At the request of the government they were divided up to head up four separate plastic surgery units to treat the expected influx of injured servicemen from the different branches of the armed services. Sir Archibald moved to the recently rebuilt Queen Victoria Hospital in East Grinstead, and founded

a centre for plastic and jaw surgery, dealing with Royal Air Force (RAF) casualties.

As airborne warfare began it became clear that this was the stark new chapter in medical treatment. The Queen Victoria Hospital in East Grinstead was to treat casualties at an unparalleled volume and severity of injury. The phrase 'airman's burn' quickly became a medical term referring to the common similarities of injuries sustained to the face and hands. These injuries were mostly caused when aircraft fuel tanks ignited and pilots were caught up in the inferno before they could parachute to safety. Most pilots removed their gloves and goggles during flying in order to aid control of the aircraft but unfortunately this also exposed them to even greater levels of injury.

It was also clear to Archibald that current burns treatment techniques were inadequate, particularly the use of Tannic Acid and Tannic Jelly which when applied shrank the tissue around a burn to reduce fluid loss. However, this tightening of the tissue of hands and face caused far more problems than benefits. McIndoe responded to this by devising new ways to treat burns including use of saline to bathe them and forced the Ministry of Health to ban Tannic Acid treatments. He also evolved previous plastic surgery techniques to become far more effective in restoring wounded skin and tissue. His vision for treatment was far reaching and summed up in an early comment that he made whilst trying to treat burns. He said: "When it is realised that a third degree burn produces a raw surface for which the best dressing is skin itself applied at the earliest possible moment, we shall have come nearest to reconciling treatment with function."

An extraordinary club: the Guinea Pig Club

Not only did McIndoe advance technical innovation but also developed strategies for rehabilitation and reintegration of burns survivors back into society. In 1941 an unusual club was formed at the Queen Victoria Hospital – the Guinea Pig Club, whose members consisted of his recovering patients.

The club committee was carefully selected; Sir Archibald (affectionately known as 'the boss' or 'the maestro') was the first president (Figure 3). The Guinea Pigs' sense of humour is evident in the club's constitution: the first secretary



Figure 4: Sir Winston Churchill visiting the Guinea Pigs.



Figure 5: McIndoe pioneered not only surgical techniques but holistic approaches to recovery.



Figure 6: The Guinea Pig Roll of Honour.

had severely damaged fingers encouraging minimal minute taking, while the severely damaged legs of the first treasurer made him unlikely to 'walk off' with club funds. To become a Guinea Pig, members had to be aircrew and have undergone two surgeries performed by McIndoe.

Most of the club would be made up of British pilots or bomber crewmen. However, a number of Guinea Pigs were Canadian, Australian, New Zealanders, American and East European. As the numbers of casualties grew, McIndoe increased the numbers of people in his surgical team at East Grinstead. A key addition to the team in January 1942 was Canadian plastic surgeon, Dr Ross Tilley, who helped McIndoe with his pioneering techniques.

McIndoe's 'boys' were allowed to wear their own service uniforms whilst recovering and a supply of beer was always on tap in the form of the barrel kept in the ward. The formation of the club was a key part of rehabilitation, using camaraderie and the shared experiences of the men to help support each other during their lengthy and painful rehabilitation.

For some members of the club their disfigured features were too much for their wives and girlfriends to cope with and their pre-war relationships ended at a most traumatic time. However, a number of them ended up marrying nurses from the hospital as they got used to seeing past their injuries. The people of Britain were indebted to all personnel from the armed services for their valiant efforts during WWII, and the Guinea Pigs met and talked of their experiences to many people, including Sir Winston Churchill (Figure 4).

Psychological support was also needed when the Guinea Pigs left the protection of the hospital ward and re-entered society to face the general public, whose responses were often not kind when seeing their disfigurements. Visits up to London were often accompanied by horrified onlookers and comments about not letting them out in public.

McIndoe then put out a request that hospital staff and the welfare committee should spread the word that any injured airman in town must not be made to feel uncomfortable and be regarded as "normal young men who happen to be in temporary difficulty." The people of East Grinstead thus became a key part of McIndoe's vision and were fundamental in the rehabilitation process (Figure 5). The people of East Grinstead and the warmth and acceptance that they showed to the Guinea Pigs were quite rightly given the accolade of 'the town that didn't stare'.

Fortunately, many people showed extraordinary kindness to the Guinea Pigs, particularly Neville and Elaine Blond who opened up their substantial house for them to stay in whilst recovering and turned a blind eye to the racket and mischief cause by the rabble of 'Pigs'.

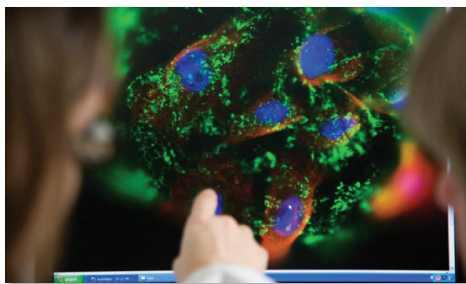


Figure 7: Research scientists at the BMRF discussing some fluorescent staining of skin cells.

By the end of the war, members of the Guinea Pig Club totalled 649, testament to the incredible efforts of Archibald McIndoe (Figure 6). Many of the Guinea Pigs managed to reintegrate into society and find work through their determination and confidence, which was drawn from the other members.

The Guinea Pigs continued to meet annually to celebrate Archibald McIndoe and the club. For many years the Guinea Pig pub in East Grinstead was a focal point for summer reunions, followed by a black tie dinner and toasts made to 'the Queen', 'absent friends' and 'the women', completed with a rendition of the Guinea Pig anthem. Against the odds many have lived into old age. The youngest is in his late 80s and the oldest is 93 years of age.

In 1946 Archibald became a member of council for the RCS and in 1947 was awarded a knighthood to honour his work during the war. Around this time he visited East Africa and began farming in the foothills of Mt Kilimanjaro. His time spent in the country led him to co-found the African Medical and Research Foundation (AMREF) in 1957 to treat the rural population of this area.

A vision for the future: the Blond McIndoe Research Foundation

Sir Archibald and his friends Neville and Elaine Blond were planning the foundations of a medical charity in the form of a new research institute at Queen Victoria Hospital to be launched in 1961. Sadly, at just 59 years old, Sir Archibald McIndoe died in his sleep on 11th April, 1960, one year before the opening of the Blond McIndoe Research Foundation (BMRF). His ashes were buried in the Royal Air Force church of St Clement Danes.

In the years that followed, Sir Archibald's legacy has been nurtured and developed, with much ground breaking research into transplantation technologies, microvasculature and microsurgical techniques, as well as pioneering work in the fields of eye and nerve research being undertaken at the BMRF together with colleagues at The Queen Victoria Hospital.

The present day research activities at BMRF have also built upon this rich clinical and scientific legacy by using state-of-the-art, novel bioengineering and regenerative medicine techniques to identify ways to improve wound healing and repair tissue injuries caused by trauma, surgery or cancer. BMRF scientists are also keen to carry out patient participatory research, developing models to involve patients in the design of projects and in the execution of research. The interaction between patients, clinicians and scientists is of paramount importance to any truly translational, interdisciplinary research effort, which aims to improve outcomes for future burns, trauma and cancer patients.

The Blond McIndoe Research Foundation depends entirely on donations to keep it at the forefront of burns, wound healing and skin cancer research. If you wish to know more about its work, get involved in its activities or to donate to its research activity please visit <http://www.blondmcindoe.org>

A long overdue memorial to Sir Archibald, his Guinea Pigs and to 'the town that did not stare' is to be erected in a prominent place in East Grinstead in June 2014. For more information on this unique project please see our website. www.mcindoeememorial.com or email Jacquie.pinney@blondmcindoe.com

The importance of the Guinea Pig Club

It was 20th July, 1941 which saw the formation of the most exclusive club during the Second World War, where none of the members actually volunteered to join, and was something most men would not pay an entrance fee to become a member. But through their injuries and the treatment they received, at the then known Queen Victoria Cottage Hospital by Archibald McIndoe and his team, they became known as the Guinea Pig Club.

In 1940 when the Battle of Britain began, Hurricane and Spitfire pilots, together with other aircrew suffering from burns and other relating injuries, were taken to what was to become the world famous hospital led Mr A McIndoe in East Grinstead.

The name and idea for the Guinea Pig Club came about one day while some of these airmen were chatting, and passing the time away in one of the newly erected huts. It was suggested that perhaps they should form a 'drinking club', which would disband at the end of the war. The name was chosen as guinea pigs were mainly used for medical experiments, and, as plastic surgery and the treatment of burns was then in its infancy, new methods were being tried on the injured airmen. In addition to the airmen, doctors and surgeons were made honorary members of the club, and local benefactors and supporters were to be known as 'Friends of the Guinea Pig Club'.

In 1957 a public house was opened in East Grinstead close to the hospital and was named in honour of the club The Guinea Pig, so being the only one in the world to bear that name. Sadly it has now been demolished to make way for housing, but thankfully renamed Guinea Pig Place.

This public house played an important part in the three day annual reunion, known by many as 'the Lost Weekend' for obvious reasons, up until 2007, when unfortunately due to the membership numbers, their ages and travelling difficulties, it was decided it was time just to hold an AGM each year together with a buffet lunch, but still in the town they regard as their home.

Sir Archibald's legacy lives on, not only in the world of plastic surgery, but for his wisdom and foresight in the rehabilitation of these airmen, to enable them to carry on with life after the war as near normal as possible, and it was a great honour when his HRH Prince Phillip, Duke of Edinburgh accepted to become the president of the club, a post he still holds today.

After 72 years the aim of the club is to ensure that the Guinea Pigs or the widows in need of financial help are taken care of, and medical advice is available if needed, and communication between members is maintained.

Today, out of the original 649 members, there are only 61 surviving worldwide, 32 of whom live in the UK, but the club will continue until the last survivor can raise his glass in memory of the club, Sir Archibald and his team, the hospital and all past Guinea Pigs, and to remember the words that Sir Archibald said in 1944: "We are the trustees of each other. We do well to remember that the privilege of dying for one's country is not equal to the privilege of living for it."

R Marchant, FCDP, Hon Secretary, Guinea Pig Club.

Jacquie Pinney,

Blond McIndoe Research Foundation, Queen Victoria Hospital, East Grinstead, UK.

Anthony D Metcalfe,

Blond McIndoe Research Foundation, and University of Brighton School of Pharmacy and Biomolecular Sciences, Brighton, UK.

E: tony.metcalfe@blondmcindoe.org