

“SI MONUMENTUM REQUIRIS CIRCUMSPICE”
PLASTIC SURGERY IN WAR AND PEACE

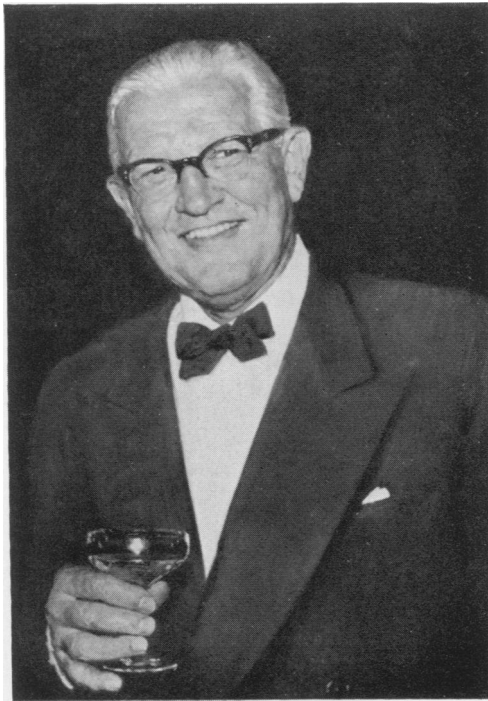
The first McIndoe Lecture delivered at the Royal College of Surgeons of England
on
7th December 1962

by
Air Vice-Marshal George H. Morley, C.B.E., Q.H.S., F.R.C.S.
Royal Air Force

An account of some of the achievements of Sir Archibald McIndoe with special reference to the development of the Art of Plastic Surgery and to the relief of burn casualties of the War. His part in the development of Plastic Surgery within the Royal Air Force and a review of its main use in Peace. An assessment of the need for Plastic Surgeons in Accident Services of the future and a realistic appreciation of Cosmetic Surgery.

In Memoriam

Mr. President, Members of Council, Fellows, Members and Guests:
Pray remember ARCHIBALD HECTOR McINDOE, who died whilst
asleep on 12th April 1960, in the sixtieth year of his life.



By courtesy of Hans Galleries, Duke Street, S.W.1.

Fig. 1. Sir Archibald McIndoe (1900–1960). From the portrait by Frank Eastman, which was presented to the Queen Victoria Hospital, East Grinstead, by The Guinea Pig Club and unveiled by Lady McIndoe on 23rd September 1961.

GEORGE H. MORLEY

BORN IN DUNEDIN, New Zealand, where he qualified a Medallist in Clinical Medicine and Surgery in 1923, McIndoe spent the following seven years working at the Mayo Foundation, Rochester, in the United States, becoming a Master in Surgery and in the Science of Pathology of the University of Minnesota.

In 1930, when he was about to acquire American nationality, he came to England anticipating a career as an abdominal surgeon; in which his hopes were sadly disappointed. At the age of 30 he found himself, as he once told me, “on his uppers” in London with a wife and very young



By courtesy of Lafayette, Dublin.

Fig. 2. Sir Archibald McIndoe being conferred with an Honorary Fellowship of the Royal College of Surgeons in Ireland on 14th February 1959.

family, without a job or prospects and with only a very small sum of savings.

He became a Fellow of this College in 1932, and of the American College of Surgeons in 1934. He was later appointed an Honorary Fellow of the American College and also of the Royal College of Surgeons in Ireland (Fig. 2), and a Doctor of Medicine, *honoris causa*, of the University of Uppsala, Sweden.

In 1946 he was knighted. He was also a Commander of the Order of the British Empire, of the Legion of Honour of France, of the Order of White Lion of Czechoslovakia, of the Order of Orange Nassau of the Netherlands and an Officer of the Order of Polonia Restituta of Poland. He held the War Medal of Czechoslovakia, but he never wore uniform.

“ SI MONUMENTUM REQUIRIS CIRCUMSPICE ”

In 1948 he was elected to the Council of this College and later served as Vice-President. In 1958 he delivered the first Bradshaw Lecture to be devoted to Plastic Surgery.

For this College, McIndoe stimulated donors and appeals to the public when Phase III of the rebuilding programme was short of money, and reconstruction of the College continued. There is a proposal to name part of the building after him. His personal gift was the stained-glass window which is on the left side of the Lecturers in this Hall (Fig. 3).

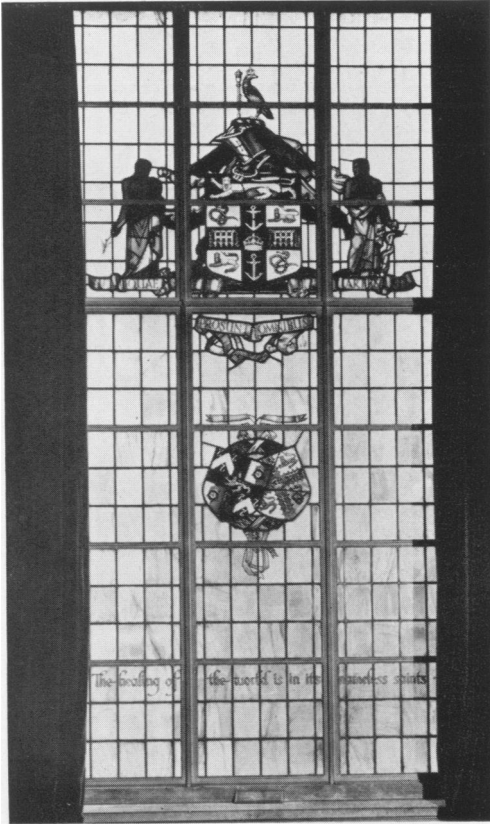


Fig. 3. The stained-glass window, on the left side of the lecturer in the Edward Lumley Hall, presented by Sir Archibald McIndoe.

His cremation was private. On 12th May 1960, the Memorial Service, which was held in the church of St. Clement Danes, was attended by our President and Council in formal state and the church was packed with people of all rank, from all walks of life and from several countries.

His ashes rest in the vault of St. Clement Danes, the parish church of the College. A ceremonial Chair has recently been presented to this church

GEORGE H. MORLEY

by Lady McIndoe, to the glory of God in memory of Sir Archibald McIndoe. The church was itself reconstructed following damage by blast and burning in war, and re-dedicated to be the Church of the Royal Air Force.

The debt of the Royal Air Force to Archibald McIndoe is now acknowledged in perpetuity. The Council of the Royal Air Forces Association has endowed this biennial lectureship in memory of Sir Archibald and it is now established by the Council of this College.



Fig. 4. "The Birth of Plastic Surgery" at the Cambridge Military Hospital, Aldershot, September 1916, by the late Henry Tonks, Esq., F.R.C.S., Professor of the Slade Art School. From the original presented to the British Association of Plastic Surgeons by Sir Harold Gillies and now displayed in the Royal College of Surgeons of England.

The McIndoe Lecture, by its terms of reference, "is to be devoted to Plastic Surgery or another allied subject and shall be based upon the lecturer's experience in this field".

It is a very gracious compliment to the Royal Air Force, rather than any personal worthiness, that brings to me the honour of presenting the first of these lectures.

“ SI MONUMENTUM REQUIRIS CIRCUMSPICE ”

THE BIRTH OF BRITISH PLASTIC SURGERY

The young and bitterly perplexed McIndoe, newly come to London, called upon his distant cousin Sir Harold Delf Gillies, who helped him in his hour of need. McIndoe studied plastic surgery under this Master and later became his partner.

British surgeons had had little to do with plastic surgery until 1916, when Captain Harold Gillies, then in the Royal Army Medical Corps, took charge of a unit of two hundred beds in the Cambridge Military Hospital at Aldershot. This is recorded in the College by the study of the artist-Fellow, Henry Tonks, which is entitled “ The Birth of Plastic Surgery ” and dated September 1916 (Fig. 4).

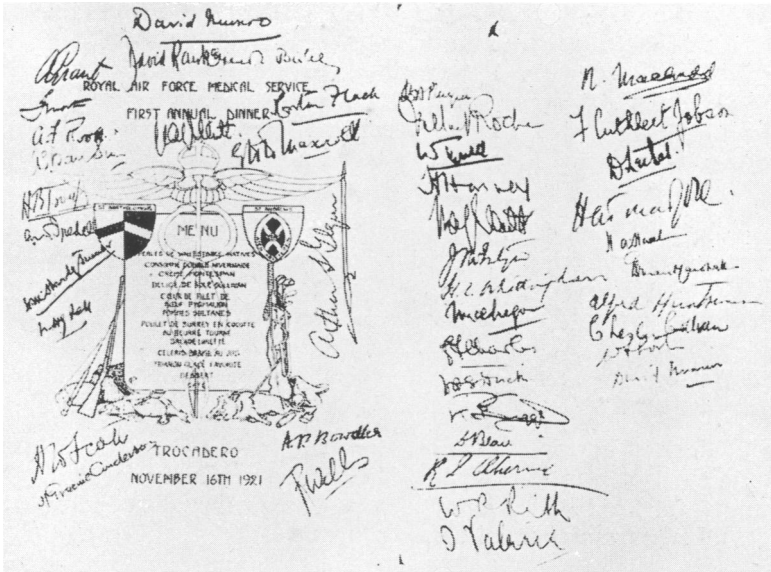


Fig. 5. Autographed Menu of the First Annual Dinner of the Medical Branch of the Royal Air Force at the Trocadero, on 16th November 1921. From the original presented to the author by the late Lady Munro.

Gillies is universally hailed as “ The Father and Founder of British Plastic Surgery ”. His work and that of the team of surgeons with him, first at Aldershot and then at Sidcup, laid the foundation of the specialty as it is known and practised to-day. With him as pioneers were William Kelsey Fry as dental surgeon and Ivan McGill as anaesthetist.

In 1919, Thomas Pomfret Kilner joined Gillies at Sidcup and later became his partner before the time of McIndoe. When invited by his consultant surgeon, Seymour Barling, to return to England as a plastic surgeon, Kilner enquired what plastic surgery was? Barling answered that he did not know. This reply reflects the general knowledge about plastic surgery for at least the next 10 years, except that it was some magic performed by Gillies, Kilner and Kelsey Fry.

THE MEDICAL BRANCH OF THE ROYAL AIR FORCE

During this period the Medical Branch of the Royal Air Force was also developing, as the autographed menu of its First Annual Dinner on 16th November 1921 testifies (Fig. 5).

Sir David Munro, its Director from 1921 to 1930, wrote in his autobiography:

“ If I had one ideal for my new medical service it was that the officers should be Doctors first and not become too military, and I believe it was attained; conversely, that they should be an integral part of the Royal Air Force organisation and not a service within a service.”

Sir Harold Gillies became Civilian Consultant in Plastic Surgery to the Royal Air Force. The precise date of his official appointment is uncertain, but he would be called in to operate occasionally at Uxbridge, on a damaged face or, perhaps, to perform a cross-leg flap; but even in the late 1930's we, in the Service, knew little or nothing about plastic surgery. When, in October 1938, I approached Sir Harold and asked if he would train me, he accepted readily but I could not obtain study-leave before War was declared.

Just before Gillies died, in September 1960, he wrote to me: “ Those Uxbridge days and my first official appointment as Plastic Surgeon to the Royal Air Force are a little obscure. Trenchard was very friendly . . . ” He continued: “ *And then I introduced Archie gradually, and then wrote and asked whether they would put him in my place if I resigned—I think 1938—Possibly the best thing I did in my little life and pretty generous at that, laddie boy!* ”

McIndoe was appointed Civilian Consultant to the Royal Air Force in 1938 in succession to Sir Harold Gillies, who became Honorary Civilian Consultant. Both held these appointments until they died and our debt to them both is immeasurable.

WAR

In September 1939, within the Emergency Medical Service, Gillies opened the Plastic Surgery Unit at Park Prewett, Basingstoke; Kilner at Roehampton, later at Stoke Mandeville; Rainsford Mowlem at Hill End, St. Albans; McIndoe at East Grinstead. Kelsey Fry developed the maxillo-facial work at all these Units.

TREATMENT OF BURN CASUALTIES

The early casualties of the war and of the evacuation from Dunkirk revealed the disastrous results of treating burns by coagulation with tannic acid. Exposure to extremely high-temperature, searing flame caused very severe damage to hands and faces. This was especially so in the highly trained aircrew who were “ The Few ”, as immortalized by Sir Winston Churchill.

“ SI MONUMENTUM REQUIRIS CIRCUMSPICE ”

At the Royal Society of Medicine, on 6th November 1940, Surgeon Rear-Admiral Cecil Wakeley reported: “ At the outbreak of hostilities the treatment of burns by tannic acid was considered completely satisfactory. Experience disproved this.” Vaughan Hudson compared it with the primary closure of an infected wound.

McIndoe’s condemnation was damning indeed! “ Totally crippled hands,” he reported, “ and severe facial deformities with loss of vision, which must be considered the direct result of coagulation therapy and not of the burn, have too often been seen and, as most wartime burns involve the face and hands, this problem is a serious one.”

Several other surgeons agreed with him but by no means all. He threw all his determination and forcefulness of character into this issue.

It has been reported that he had a “ battle with the brass-hats ” in the Service over this. In fact, his chief opponents were the bulk of our profession who adhered to the conventional therapy of civilian practice and applied it so blindly and so disastrously to military surgery.

The tannic acid coagulation of burns had been abandoned by the Air Ministry in midsummer 1940, on the advice of a sub-committee on burns composed of Mr. McIndoe, Wing Commander Stanford Cade and Group Captain Philip Hall. By September of that year it had been decided to send Royal Air Force surgeons to be trained at East Grinstead and I was posted there on 4th December 1940. Earlier in 1940 our nursing orderlies commenced training in a new burn technique at Basingstoke, Hill End and at East Grinstead.

McIndoe postulated “ Ten Commandments of Burn Treatment ” based upon a surgically open technique. This is not to be confused with the Exposure Treatment of the present day; which, paradoxically, is a reversion to a surgically “ closed ” technique. He advocated the normal-saline bath, which he developed with the help of technicians of the Air Ministry and Office of Works; an atraumatic dressing—he disliked intensely any needless pain or suffering—and he used tulle gras and sulphanilamide; very early skin-grafting; the *preservation* of function of underlying parts—he had in mind not only the movement of fingers and other joints but also the saving of vision; and the segregation and concentration of burn cases in special units.

McIndoe had a clear and decisive mind; he knew exactly what he wanted. To those who could help to further his aims he would state his case tersely and convincingly. But he would “ turn on the heat ”, as he used to say, or else his quite devastating charm of manner to convert those who wished to obstruct. He was equally potent with his pen.

GEORGE H. MORLEY

THE BURN PATIENT

Considerable as was McIndoe's contribution to the physical surgery of burns, his outstanding and individual achievement was the preservation of morale amongst those whose honourable wounds rendered them hideously disfigured and socially "shocking".

First, he gained their confidence; then, he set about removing the load of anxieties which beset *all* burn patients, demanding a similar attitude from all who came into contact with them. He never broke faith with his patients, he took them into his confidence and he was better than his word.

He exerted himself to remove petty, unkind and unnecessary restrictions; conventional, social and bureaucratic. He hated humbug and *how* he hated humbugs!

"Hospital Blue" irritated patients physically and aesthetically; he would have none of these hideous garments. The retention of acting rank and pay was extended in the case of war casualties; so was the period for which they could be retained on full pay in the Service before being invalided. The rate of disability pension for disfigurement was increased to 100 per cent. Later in the war, he urged that the released prisoner-of-war should not be invalided immediately but should be treated in the Service.

There is little doubt in my mind that he influenced these and other decisions by his sustained championship of the human problems of his patients.

THE GUINEA PIG CLUB

Many books have been published by these war-time patients in which "The Maestro", as they called him, has been fully justified. When they formed a reunion club, McIndoe developed it from the social gathering, which was the first thought, to be a clinical follow-up opportunity and a rehabilitation-resettlement organization.

He described the "Guinea Pig Club" as the most painfully exclusive club in the world. To-day there remain some 450 members, scattered about the globe. The Royal Air Force Benevolent Fund, the Air Ministry, the Ministry of Labour, several leaders of Industry and generous "Friends of the Guinea Pigs" have all helped to make it succeed beyond all expectation.

The vast majority of these Guinea Pigs have made a success of their "post-burn" lives; a proportion needed financial and other assistance. The principle of the Club is that a badly burned or disabled man must be helped to find a place in the community whatever the cost.

As they grow older some Guinea Pigs begin to find life becoming more difficult earlier than those who are whole. The resources of the club are

“ SI MONUMENTUM REQUIRIS CIRCUMSPICE ”

now devoted to act as a cushion between the time need arises and before the Benevolent Fund can assist; and to provide those invaluable grants and loans for which this excellent Fund does not normally cater.

So, the Guinea Pig Club continues its good purpose, which is by no means accomplished, very deeply honoured and greatly encouraged by having, as its President, His Royal Highness The Prince Philip, Duke of Edinburgh.

McIndoe's heart and soul was in this Club and with each individual member of it. In October 1962, two months ago, 140 members gathered at East Grinstead for its 21st Birthday, a celebration which included the usual clinical screening.

History must surely and certainly accord to Archibald McIndoe the credit of being the leading pioneer in the complete change of technique and attitude adopted towards burn casualties which have characterized the last 20 years of his life.

He has his critics: all successful men have them! But in devoting himself so persistently to the welfare of his patients, not being content to restrict his interest to their revealed physical lesions, he was an outstanding example of the best tradition of British Medicine: the family doctor, the Guide, Philosopher and Friend of his patients.

BURN CENTRES IN THE ROYAL AIR FORCE

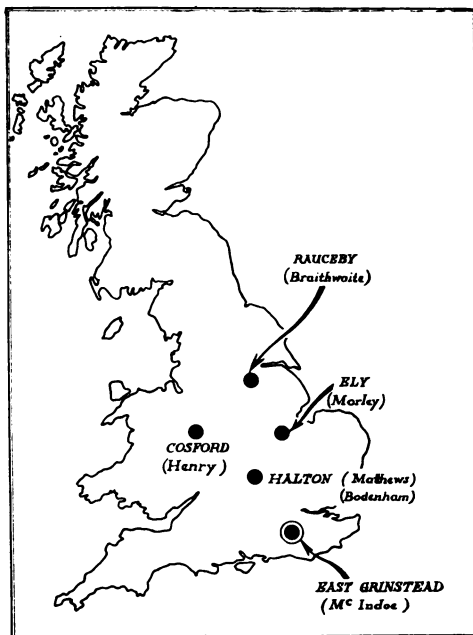


Fig. 6. Distribution of Burn Treatment Centres at Royal Air Force Hospitals and East Grinstead during the war, from 1942 to 1945. (The names in brackets are of the surgeons-in-charge.)

From 1942 until 1946 there were four Burn Treatment Centres disposed geographically in Royal Air Force Hospitals in England. At Halton, David Matthews and Denis Bodenham developed a Plastic Surgery Unit in addition to its Burn Centre. Tom Craddock Henry was at Cosford, Fenton Braithwaite at Rauceby (Fig. 6).

Each Burn Centre had between 12 and 14 beds and an average annual turnover of about 100 to 130 patients, of whom just over 50 per cent. were due to air accident and enemy action. The overall mortality rate of admitted patients was between 5 per cent. and 10 per cent.; this does not indicate the total deaths from burns in the Royal Air Force during the war. The staff included the orderlies whose training I have already indicated, who gave devoted and gentle nursing care. A Rehabilitation Unit was formed at Marchwood Park, on Southampton Water.

EAST GRINSTEAD

East Grinstead accepted long-term patients from all these Centres and itself covered South-East England. Its development to fame is known to all: the Canadian Wing, the American Block, the Children's Wards from "Aunt Agatha's Peanut Club" and, recently, the McIndoe Memorial Research Unit given by Mr. and Mrs. Neville Blond because, I feel, McIndoe was always interested in research and convinced that "the next big break-through in plastic surgery will be the successful growth of the homograft". Nor can we forget, who knew it in those early days when all was but a huddled extension to a cottage hospital, that miniature factory in its grounds where burned servicemen continued their war-effort by assembling flying instruments for aeroplanes, until they could get back themselves: a very early instance of purposeful rehabilitation which we appreciate so much now.

No one can visit this remarkable institution and look around, without remembering Archibald McIndoe.

APPLICATION IN THE ROYAL AIR FORCE

In the Royal Air Force the treatment of burns was dominated by care of the face and hands. In his Bradshaw Lecture, McIndoe gave a graphic account of the former and the severe burn of the face was commonplace in all our Centres.

Cold occasionally caused similar injury—as occurred with an American bomb-aimer when the perspex shield of a Flying Fortress was blown away during a midwinter raid on Berlin. Such injury can be as serious as that caused by heat and is often more insidious in its effect.

Several other conditions besides burns were referred to us as we developed the rudiments of plastic surgery which McIndoe had taught us. Recent wounds, requiring healing grafts of skin; fractures with associated skin-loss or unstable coverage, requiring substantial integument before orthopaedic surgery could proceed; the relief of contractures, particularly

of the hand; the healing of plaster sores; the care of those most disabling fractures and wounds of the face of which so many knew so little, then, until Sir William Kelsey Fry, newly appointed Consultant in Dental Surgery to the Royal Air Force, had supervised the training of several dental surgeons in maxillo-facial surgery.

Centres for maxillo-facial treatment were soon established at our hospitals to work in conjunction with the plastic surgeons of the burn centres, and their good work continues to this day.

The liaison which developed between our embryonic plastic surgery work at Ely and its orthopaedic unit was such that, when the Section of Orthopaedics of the Royal Society of Medicine met there, on 13th June 1942, a short paper was presented on “ Co-operation between Orthopaedic and Plastic Surgery ”, a theme of considerable significance at the present, especially in Accident Surgery. An early instance was quoted where a cross-leg flap had resulted in union of a fractured tibia, for which bone-grafting had been planned.

McIndoe visited each Centre regularly and was always stimulating and helpful. On one occasion his opinion was asked on an acute abdominal catastrophe which occurred whilst he was in the hospital. He obliged, and promised to send us a reprint of his paper in the *British Journal of Surgery* on “ Delayed rupture of the Spleen ”, which you will recall as a classic of 1932. On another occasion I assisted him to remove a colleague’s gall bladder and it was a real joy to see him at work in the upper abdomen.

PEACE

The formation and objectives of the British Association of Plastic Surgeons

By 1945, several surgeons had been trained in plastic surgery by the four Great Men of the specialty in Britain, Gillies, Kilner, McIndoe and Mowlem, and several dental surgeons in maxillo-facial surgery by Kelsey Fry. For the first time in history casualties in war had occurred as freely amongst our civilian population as in the Armed Forces of the Crown. Much more was known about the principles and the potentials of Plastic Surgery and there remained much work to be done in this country and in Europe.

In Britain, the Medical Reformation of 1947 resulted in the establishment of plastic surgery in the new National Health Service. The trained plastic surgeons did not scatter and lose contact with each other but, on 20th November 1946, we met in this College and, sponsored by the then President, Sir Alfred Webb-Johnson, we formed the British Association of Plastic Surgeons; designed “ to promote and direct the development of plastic surgery along sound and progressive lines ” and “ to provide for the dissemination and diffusion of knowledge of plastic surgery among members of the Association and the medical profession as a whole ”.

There were 40 founder-members at that meeting. There are now 132 Full Members in Britain, the Commonwealth and in the Republics of Ireland and South Africa: "Registered medical practitioners who have given evidence of satisfactory scientific and practical attainments in plastic surgery." The standard usually applied is—four years' general surgical training, a higher diploma in Surgery, and four years' further training in an approved Plastic Surgical Centre.

There are also 332 Associate Members: "Medical or Dental practitioners registered in the Country in which they practise, who are interested in Plastic Surgery."

A Joint Committee with the Council of this Royal College stands to regulate training requirements and advise upon the allocation and establishment of plastic surgical appointments.

It is now 17 years since the end of the war and we find plastic surgery an active and widespread specialty, not only in Britain but throughout the world, with The Federation of Plastic Surgeons Associations holding International Congresses in different countries every four years.

Our journal, the *British Journal of Plastic Surgery*, had a circulation in 1962 of 1,850. When it was first issued in 1948, Lord Webb-Johnson (then Sir Alfred) wrote in his Foreword:

"The importance of Plastic Surgery can hardly be exaggerated, for some of the conditions which the plastic surgeon aims to correct are among the most distressing and disabling to which human flesh is heir. The correction of major disfigurement enables the patient to mix freely with his fellow-men and to feel that life is worth living. What a change from the grim and gloomy outlook for the grossly disfigured, who sometimes feel that their only hope, if they cannot be relieved by Art, is to find, and even to seek, release by Death!"

POST-WAR INFLUENCES ON THE R.A.F. MEDICAL SERVICE

Several factors have influenced post-war development of our Medical Service in the Royal Air Force, an essential background to the development of Plastic Surgery as one specialty within it.

Chief amongst these factors are:

- (a) The sustained interest of our civilian colleagues and Consultants, and our own purpose to improve clinical standards.
- (b) The strangely warlike Peace of our times.
- (c) The establishment of the Women's Royal Air Force as part of the Regular Force.
- (d) The treatment of Service families in the United Kingdom as well as overseas.
- (e) The acceptance of civilian patients of the National Health Service.

“ SI MONUMENTUM REQUIRIS CIRCUMSPICE ”

- (f) The development of “ Aero-medical evacuation ” of patients, following the airborne evacuation of casualties from the Continent after D-Day. This is now a regular, schedule service with no unusual or spectacular feature, and it makes our medical world smaller.

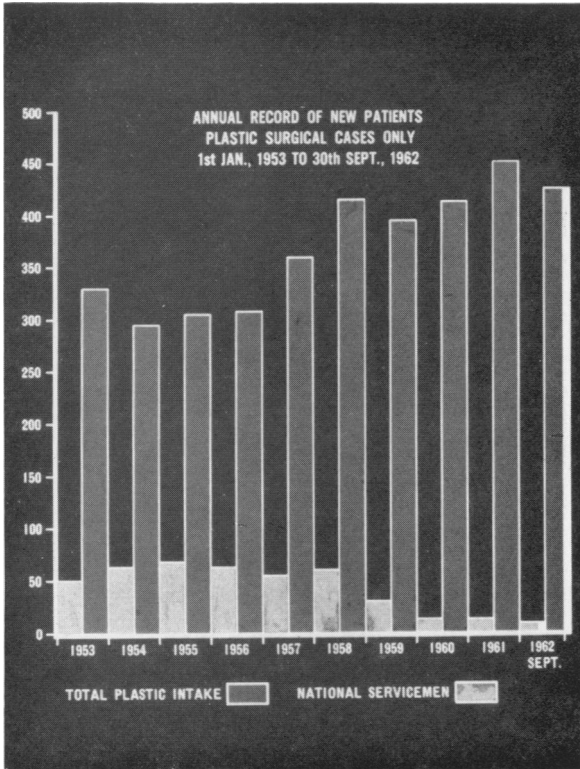


Fig. 7. Annual totals of plastic surgical patients accepted for treatment at the Royal Air Force Plastic Surgery Centre. Contrary to prediction the cessation of conscription has not diminished our practice.

Overseas hospitals are no longer isolated, they receive Consultant visits and they evacuate patients for special treatment regularly and normally, with nursing-sister care in the air and hospital accommodation at stops *en route*.

Modern medical conditions in the Royal Air Force are a complete contrast to those which prevailed before 1939. It is now practical to develop specialized units within the Service in the United Kingdom, to receive patients from several thousand miles away in sufficient time to obtain the greatest benefit.

GEORGE H. MORLEY

As example: A soldier, injured in a road accident at 3 a.m. in Germany, received severe facial injuries and a broken leg. At 4.30 a.m. he had preliminary surgery at the Army hospital at Rinteln. By 5.30 p.m. on the same day he was admitted to our Plastic Surgery Centre at Halton, Buckinghamshire.

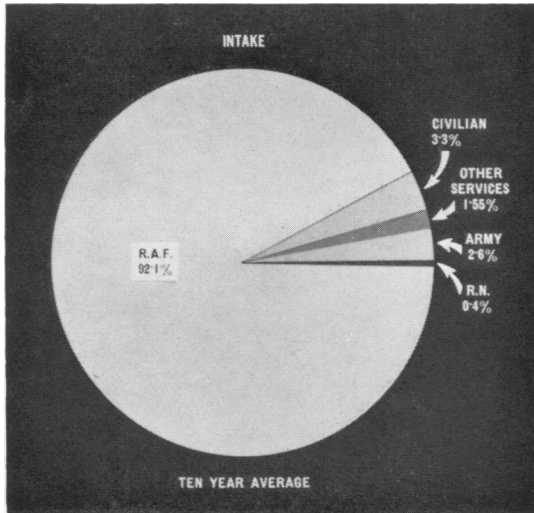


Fig. 8. The source of patients accepted for treatment at the Plastic Surgery Centre of the Royal Air Force. Service families are included in the average for their respective Services.

This is as it should be! But the years which immediately followed 1945 were those of demobilization and recession. The Burn Centres closed and, at the end of 1946, the practice of plastic surgery virtually ceased, officially. However, the lessons we had learned in the hard school of war were not forgotten.

“SI MONUMENTUM REQUIRIS CIRCUMSPICE”

PLASTIC SURGERY IN THE ROYAL AIR FORCE

A survey of 1,000 plastic surgical operations performed between 1947 and 1951 led to the establishment of the specialty with one plastic surgeon, one maxillo-facial dental surgeon and two medical officers, with accommodation of 60 beds in a wing detached from Princess Mary's R.A.F. Hospital at Halton. The development of the specialty in the Service was very strongly supported by Sir Archibald McIndoe and, since his death, by Mr. Percy Jayes, his successor as Civilian Consultant to the Royal Air Force.

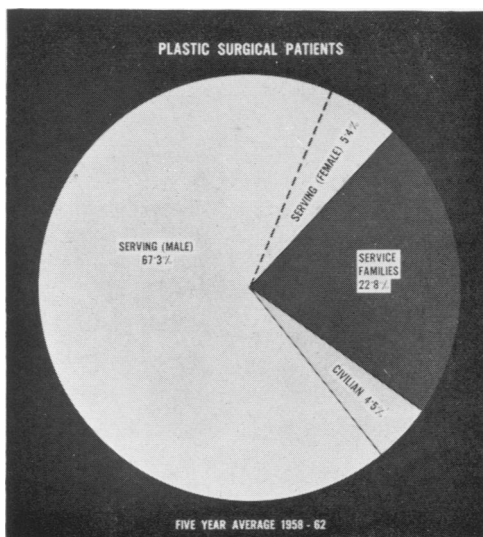


Fig. 9. Analysis of patients by occupation. Five-year average, 1958 to 1962. Though predominantly male, the proportion of women and children is probably higher than is generally appreciated.

This Plastic Surgery Centre is part of the general hospital, which is advantageous, and is adjacent to the R.A.F. Institute of Pathology, where the Pathology of Accidents is a special study. The Centre is self-contained as to operating theatre, saline baths, full dental service and a medical photography unit which is under the control of the Photographic Reproduction Branch of Air Ministry, where several, but not all, of these illustrations were prepared.

On 1st January 1953 we started a new system of records and, in almost 10 years, we have now treated 3,600 plastic surgical patients in addition to the purely dental practice (Fig. 7). In October 1960 a detailed report of this role was presented at the United Services Section of the Royal Society of Medicine.

GEORGE H. MORLEY

The volume of work has increased progressively. Contrary to prediction, the cessation of conscription did not diminish our practice. There is no order or directive to medical officers that they are to send cases to us, but advice is available for the disposal and early treatment of burn casualties and information on the other purposes of the Centre.

Approximately one-half of admissions come through out-patient consultations, the remainder are direct and unpredicted transfers from other hospitals, both in this country and overseas. We accept cases from the other Services and civilians on request: these proportions are illustrated (Fig. 8).

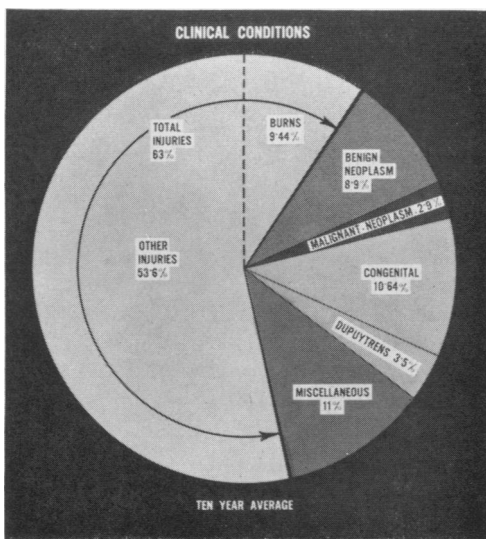


Fig. 10. Clinical analysis: ten-year average, 1953 to 1962. Two-thirds of the injuries occurred "off-duty"; that is, during ordinary civilian pursuits.

In round figures, a total of 7,000 operations have been performed during the period under consideration; of these, 2,000 have been performed by my dental surgical colleague, Air Commodore Baird, and the remaining 5,000 are plastic surgery.

Our practice is predominantly that of the healthy male, but the incidence of the female, the young and the old, during the last five years is probably greater than generally appreciated (Fig. 9). In a Service which shares the current shortage of medical graduates and which has a very proper regard for the taxpayers' pocket, our continued existence and progress must be the justification of the specialty within it.

The treatment of *congenital defects* does not seem to differ from the experience of other plastic surgical units and it is proportionate to the Service family element of our practice. It is, however, a very great comfort to the serving man, in his rather nomadic life, to know that the medical service which looks after him will also care for his family.

Malignant disease has been chiefly of the skin, including malignant melanoma and basal cell carcinoma. Possibly the corporate life in the Service and the ease of access to medical advice account for the observation that we seldom see neglected cases. Our Central Pathology service, in close liaison with the Malignant Tumour Registry at our Central Medical Establishment, is part of the team led by Air Vice-Marshal Sir Peter Dixon with Sir Stanford Cade as Civilian Consultant, to ensure efficient treatment of malignant disease in the Service. We are glad to be in that team.

Injury accounts for two-thirds of our work! Two-thirds of these injuries occur “ off-duty ”; that is, during ordinary civilian pursuits. Aeroplane accidents account for just over 2 per cent. (Fig. 10).

The treatment of severe burns is one of the most serious occupations of plastic surgery, but it is a great mistake to believe it to be the most significant part of our usefulness: in peacetime it has been 9.5 per cent. of our total work. Neither should other surgeons fail to maintain interest in burn cases; for there are not enough plastic surgeons and others must remain responsible for very early treatment, which has such marked influence upon prognosis, and the full care of minor burns in many places. There is always the possibility of large numbers of people being burned in disasters and all doctors should be prepared to cope.

Of at least equal importance is *the prevention of these terrible injuries*. McIndoe always held that “ It is better to avoid a burn than to be treated for one ” and stressed that protective clothing, if properly worn, could determine between survival with reasonable function and life as a hopeless cripple or even death. It is now some years since Dr. and Mrs. Leonard Colebrook led a crusade which brought some safeguards to domestic fires, yet these preventable accidents in the home continue unabated.

Children and the old, particularly females, suffer most. Yet youngsters still wear flowing nightdresses and little girls are dressed in highly inflammable material: to them a live spark may mean death or terrible disfigurement. It seems so unnecessary!

We all ought to stimulate a demand for fire-resistant fabrics for children; surely modern industry could and would respond to a widespread public demand for safer clothing. If not this, it ought to be compulsory that fair warning is given to purchasers when materials are inflammable and dangerous for children to wear.

Fractures of the bones of the face call for early treatment with close partnership between plastic and dental surgical colleagues. The skeleton of the face supports several significant structures, displacement of which may affect vision, breathing, smelling and mastication as well as appearance. Early reduction is essential to success. It is usually too late to be consulted "when the patient's general condition permits", which so often is a euphemism for delayed diagnosis. The unusual experience of lecturing to series of conscripted medical graduates from all parts of the country revealed widespread ignorance of the diagnosis, let alone treatment, of facial fractures.

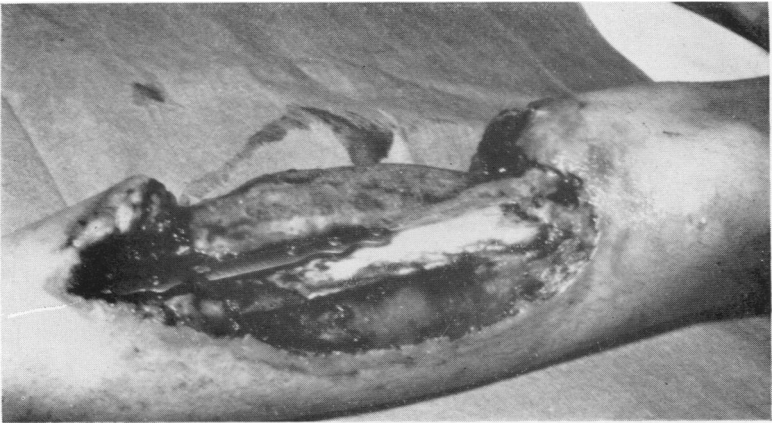


Fig. 11. *Case report: J.N. Aet. 17 years. (a) Fracture of left tibia and fibula with extensive loss of skin: condition as revealed on removal of closed plaster after renal dialysis (24th day). The right leg had been amputated high through the thigh on the second day after injury.*

Nasal surgery is a material part of our work, because the displaced external nose always displaces the front of the septum, either sideways or backwards, when it will obstruct the airway.

In the Royal Air Force and increasingly in civil life, as more people take to air travel, a free nasal airway is an essential safeguard against the risk of re-compression during descent from flight; sinus and otic barotrauma. Submucous resection of the septum alone is insufficient when the external nose is displaced and a displaced septum will resist repositioning of the nose. In these cases, the comminution of the fractured septum makes submucous resection exceptionally difficult and for some years now we correct both septum and external nose at the same operation, working with our ear, nose and throat colleague, Wing Commander Peter King. A bone graft may be inserted later if necessary.

“ SI MONUMENTUM REQUIRIS CIRCUMSPICE ”

Occasionally a grossly distorted nose has been reshaped to permit the safe and comfortable fitting of the pressurized oxygen mask, so very essential to high-altitude aircrew at present.

Surgery of the hand, particularly of the soft tissues, has been progressively passed to us chiefly, I imagine, because of our interest and partly our experience with burned hands. The interest of an individual surgeon, and the results he achieves, matter more than the label he assumes and determine whether surgery of the hand should be regarded as orthopaedic or plastic surgery.

The preservation of the fine movements of the fingers and, in particular, of digital sensation (which Moberg of Göteborg calls “the eye of the



Fig. 12. *Case report: J.N. (b)* The soft tissues are healed around the tibia by the progressive application of split-skin autografts. The plate retention of the fracture remains *in situ*.

finger”) is of ever-increasing importance in Industry as well as in the Armed Forces with the growing commitment of delicate electric and electronic devices.

It would be improper to omit acknowledgment of the essential Rehabilitation Units of the Royal Air Force at Headley Court and Chessington.

Dupuytren's disease accounts for 3.5 per cent. of our total work and is recorded separately in the diagram of classification because its aetiology is debatable—an under-statement!

In the Royal Air Force we enjoy to the full the great field of *co-operation between orthopaedic and plastic surgery*: both specialties have the same objective and symbiosis is the rule. Intact skin, of good texture and dis-

position, is and will always remain the orthopaedic surgeon's best friend; without it all his operative work is imperilled.

As I have already said, it is the greatest mistake to believe, as so many seem to do, that a plastic surgeon should not be consulted until late in a case; when he can only camouflage where he could have restored. Nor would it be very perceptive should it be thought that only burn casualties need be referred to him immediately.

As the several specialties of medicine and surgery have developed, some individuality or fission has been inevitable and probably advantageous.

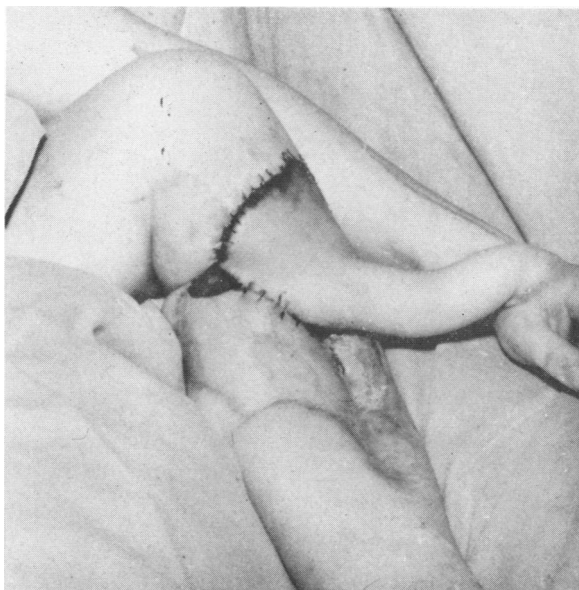


Fig. 13. *Case Report: J.N. (c)* After natural sequestration of the exposed surface of the tibia, the entire wound has healed by split-skin autografts. Attachment of the tubed-pedicle full-thickness graft from the abdomen, transported on the left wrist, to replace the free-grafted area which is progressively excised in preparation for bone grafting.

But, if there is to be an efficient Accident Service in this country, there must be team-work with this degree of fusion: that we revert to a common denominator, that of clinician, when we meet at the bedside of a case of multiple injuries. Such a patient cannot be subdivided between specialties.

As example: A young girl, aged 17 years, was crushed under an overturned horse-box. Her right lower limb came to early high amputation through the thigh—her left leg was plated for fracture with skin damage (Mr. De of Worcester). She had multiple fractures of spine and ribs and a dislocated sterno-clavicular joint.

“SI MONUMENTUM REQUIRIS CIRCUMSPICE”

She developed renal failure and was transferred to Halton, where, under the care of Air Commodore Jackson, dialysis by the artificial kidney was undertaken on two occasions.

To amputate her left leg would, surely, have been one of the simplest operations of surgery. Sir Stanford Cade supported the attempt to restore it (Fig. 11).

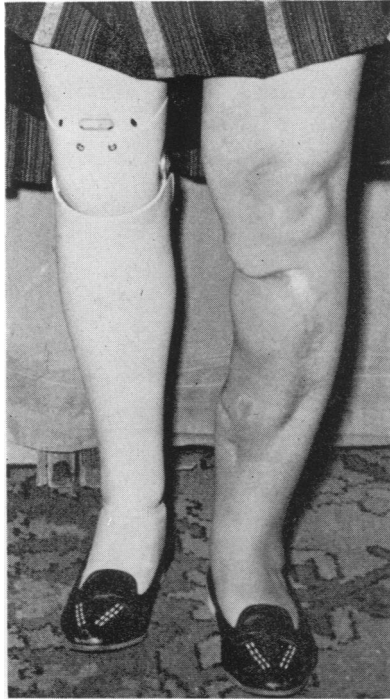


Fig. 14. *Case report: J.N. (d)* Ambulant with full weight-bearing and complete range of joints of the repaired left leg. Prosthesis on the short stump of the right thigh, which had been amputated for circulatory failure and severe crush injury on the second day after accident. Shortly after the fitting of her appliance, this young lady “walked round the city of Worcester without sticks in one hour and a half.”

The soft tissues were first healed with free skin grafts (Fig. 12). The bone was allowed to sequestrate by natural process, thereby preserving the maximum amount of viable bone and resulting in a bed of granulation tissue which accepted further skin grafts. (Surgical separation of the sequestrum before natural separation would have revealed bare bone which would not accept a graft and further necrosis would have been probable.)

When completely healed and free from all reaction, these grafts were progressively excised and an abdominal tubed-pedicle full-thickness graft,

which had been transported on the left wrist, was applied in stages. A stable healing of the skin resulted (Fig. 13).

Then, with Air Commodore Mackenzie Crooks, a bone graft and plate was applied to the tibia.

Union resulted and she is now ambulant with a prosthesis in place of her right limb (Fig. 14).

This took two years before a prosthesis could be fitted. Not always desirable, but sometimes so evidently time well spent by the patient.

“ COSMETIC ” SURGERY

When plastic surgery was established in the Royal Air Force we were very anxious that it should not be regarded as a beauty parlour. We refrained from anything which suggested cosmetic surgery, but found this rather difficult to define. The correction of gross disfigurement is praiseworthy; so, too, is an aesthetic consideration in surgery designed to improve function.

When does restoration to normal become “ cosmetic ”, as we understand the term? Function is no criterion. Is the borderline an undefined degree of disfigurement or disproportion? Or, is it simply our attitude towards it?

My experience has been that surgical colleagues referred patients for reduction of prolapsed and ponderous breasts. These cause postural pain and are often physiologically inert. McIndoe preferred an operation designed to relieve these symptoms and to restore normal function and contour; and, in properly selected cases, it usually does so. This is serious and proper surgery.

These few cases were included in the review of our role in the Air Force which I have mentioned earlier, and duly reported in *Proceedings of the Royal Society of Medicine*. If my memory is correct, a national newspaper commented that members of the Women's Royal Air Force could have their “ vital statistics ” adjusted in the Service. *Sic gloria transit!*

Neuropsychiatrists were amongst other colleagues who referred patients for correction of some blemish of an otherwise normal nose, about which the patient was worried. We require physical confirmation of the disfigurement and decline to operate upon the patient who, whilst fingering the nose, declares that he does not like it, without knowing quite why! Function must always be maintained or improved.

A lady Army Officer serving with the Army Air Corps wrote after a nasal reduction, “ I do hope you can realize what a difference this improvement has meant, particularly in retaining self-confidence not only socially but also in all fields of duty and leisure ” (Fig. 15).

“SI MONUMENTUM REQUIRIS CIRCUMSPICE”

I was finally convinced of the value of this work when a colleague wrote: “ You may recall X, whose saddle-nose you bone grafted. It is quite remarkable: she used to be a sour, dull and inefficient *so-and-so* but she is now very efficient, popular and an extremely pleasant mess-mate.”

So, too, with prematurely baggy eyelids which give a possibly undeserved appearance of dissipation. Undeniably, this is not conducive to promotion or other preference.



Fig. 15. Corrective rhinoplasty. An example of “ cosmetic ” reduction of the nose: “ I do hope you can realize what a difference this improvement has meant, particularly in retaining self-confidence not only socially but also in the fields of duty and leisure ” (quoted from a patient’s letter).

The majority in this class of case is the protuberant or “ bat ” ears, at almost any age, but reduction is mostly necessary to prevent a child from becoming self-conscious through being teased about his “ taxi-doors ” or whatever they may be called. Unquestionably, these youngsters improve enormously in bearing and confidence after proper reduction of their ears.

I have come to the conclusion that it is the *purpose* of this class of surgery which determines its *propriety*. When undertaken for the *bona fide* physical or mental benefit of the patient it ought to be regarded with wider

approval throughout our profession than appears to be the case. Conversely, if it is not in the *bona fide* interest of the patient it should not be undertaken at all. This is equally true of all other surgery.

There is, however, a very troublesome borderline, where professionally we may consider the set purpose of the patient to be unwise. Much time is required in consultation, considerable wisdom in making a decision, and a lot of persuasion to ensure conviction and "talk a patient out of having an operation": sometimes neuro-psychiatric help is necessary. *The worst management* of such a case is to belittle the patient's views and to decline to refer him, or her, for consultation with informed and orthodox plastic surgeons; thereby shutting the professional door and leaving the patient unconvinced and stranded.

Imperfectly-informed advice is available from lay sources and the patient may go outside the orthodox medical profession for treatment; this is a course which, axiomatically, we can only deplore.

THE TRUE PURPOSE OF PLASTIC SURGERY

Our senior plastic surgeon, Professor Pomfret Kilner, who received the First Gillies Memorial Gold Medal, the highest award of our Association, writes in *Chambers's Encyclopaedia* for all who will to read:

"Much of plastic surgery is 'formative' and is to be compared to sculpture. Unfortunately, the layman has been wont to confuse this work, chiefly reparative and reconstructive and concerned with restoration of function and only secondarily with cosmetic or aesthetic considerations, with the work of the 'Beauty Doctor', self-styled plastic surgeon.

"Throughout the Ages surgeons have attempted, with varying degrees of success, to repair the ravages of injury and disease, to reconstruct when the surgical treatment of disease has proved necessarily destructive, and to correct congenital defects. None of the older surgeons, however, became proficient for they were unspecialised and it fell to their lot to treat only a few cases of any particular type in the course of their surgical careers."

Sir Archibald McIndoe wrote in his typical forthright manner, in 1951:

"The boundaries of plastic surgery are year by year widening to include conditions hitherto considered as properly belonging to other specialties or to the field of general surgery. This is due to a wider appreciation of certain principles, the application of which in conjunction with a specialised technique produces better results. Contrary to the once widely-held view that plastic surgery is a specialty dependent largely on technical tricks of craftsmanship, its successful performance depends, in addition to the obvious qualities of hand, eye, and artistic perception of the surgeon himself, upon the strictest observance of these principles."

So writes "The Moving Finger" of two of the greatest pioneers of British plastic surgery as to the purpose to which their professional lives have been devoted. Both, as I interpret their words, indicate the need to observe principles and both deplore the disparagement of the specialty; one by "self-styled plastic surgeons" and the other by "craftsmen". Both indicate that full training and experience is necessary to this work.

And now, Sir, "*The old order changeth yielding place to new . . .*" Pomfret Kilner is retired, and we wish him better health after over 40 years as a plastic surgeon. Rainsford Mowlem is retiring, we wish him health

“SI MONUMENTUM REQUIRIS CIRCUMSPICE”

and happiness. Gillies, or “Giles” as we knew him, is dead—he was our Father and Founder. McIndoe we remember to-day, he died suddenly at the zenith of his career: “. . . and God fulfils Himself in many ways.”

He was, I suggest, the Great Luminary of Plastic Surgery.

Will future generations regard him as a Giant of Surgery, some of whose portraits adorn these walls? As his contemporaries, we cannot tell: for, as Tennyson wrote in his “In Memoriam”:

“We pass; the path that each man trod
Is dim, or will be dim, with weeds:
What fame is left for human deeds
In endless Age? It rests with God.”

But posterity may rest assured that we, his contemporaries, especially those in the Royal Air Force and the Guinea Pig Club, are deeply thankful that “Archie” was given to us when he was and as he was.

INTERNATIONAL FEDERATION OF SURGICAL COLLEGES



Photograph of Members of Council and Observer-Guests at a meeting of the Federation in Atlantic City, New Jersey, U.S.A., 13th October 1962. Seated left to right: Professor Paul Kyrle, Vienna; Professor A. M. Fehr, Winterthur, Switzerland; Professor F. Linder, Heidelberg; Mr. W. C. Barber, Nairobi, Kenya, East Africa; Mr. A. J. Helfet, Cape Town, South Africa; Professor Walter C. MacKenzie, Edmonton; Sir Arthur Porritt, London; Dr. I. S. Ravdin, Philadelphia. Standing left to right: Mr. Kennedy Cassels, London (*Secretary*); Dr. E. Hasner, Copenhagen; Dr. A. L. Goodall, Glasgow; Professor H. Milwidsky, Jerusalem; Professor Carl Boye Semb, Oslo; Professor K. R. Inberg, Helsinki; Dr. Arturo A. Ramirez, Butuan City, The Philippines; Dr. Prafulla K. Sen, Bombay; Professor A. K. Basu, Calcutta; Dr. Robert M. Zollinger, Columbus; Dr. Frank Glenn, New York; Professor J. F. Nuboer, Utrecht; Sir Harry Platt Manchester (*President*).