

HENRY REX MARRETT MRCS, LRCP, FRCA, DA
An appreciation

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Doctor Henry Rex Marrett, 'Rex' to his many friends and an Honorary Member of the History of Anaesthesia Society, died on Friday 7 March 2003 in his eighty-eighth year. He was a remarkable physician who served his country, the profession of medicine, and his chosen specialty of anaesthesia during an eventful period of history. His professional career spanned the Second World War and the introduction and development of the British National Health Service.

Early years and education

Rex was the second son of Doctor Henry Norman Marrett, the Medical Superintendent of Merivale Tuberculosis Sanatorium in Essex. Dr Norman Marrett had also served in the Royal Army Medical Corps (RAMC) in the Salonica campaign in the First World War, and Rex was destined to serve in the RAMC in Northern Europe in the Second World War.

The young Rex Marrett was educated at Felsted School where, in addition to his academic studies, he was a keen sportsman. This interest was maintained; Rex was a county hockey player and played for the Eastern Counties team. Later on in his life he became Captain of Kenilworth Tennis Club and Captain and President of the Coventry Golf Club.

Importantly, Rex also became interested in practical mechanical engineering while at Felsted. In fact he once told me that, at one time, he had an aspiration to become an engineer. In the event, however he chose to follow his father and take up a career in medicine.

Service in the Second World War

Rex Marrett qualified in medicine from Saint Bartholomew's Medical College in 1940, shortly after the outbreak of the Second World War. He did not lose any time. He took up an appointment as trainee House Anaesthetist to the anaesthetic department, headed by Dr Langton Hewer, at the wartime Saint Bartholomew's Emergency Medical Service Sector Hospital which was accommodated at the Hill End mental hospital near St Albans.

Within eighteen months he had passed the examination for the Diploma in Anaesthetics, the only qualification in anaesthesia available at that time. It is interesting that Rex was not the only medical man with engineering skills to take up anaesthesia in that period. This was an advantage in those pioneer days when necessary repairs, invention and modifications of equipment were part of the stock in trade of physician anaesthetists in a way that modern regulations would not permit nowadays. Very importantly, at that time he married Jacqueline Marsh (Jackie), whom he had known from teenage years. He undoubtedly regarded this event as the most important item on his CV.

Rex remained at Hill End until 1943. He rose rapidly through the training grades to become a Senior Registrar. The Emergency Medical Service hospital at St Albans dealt with many major casualties, both civilians from the London air raids, and military personnel, especially those evacuated after Dunkirk and from the North African theatre of war.

Doctor Langton Hewer and his team were evaluating the then new and non-flammable anaesthetic agent trichloroethylene during this period.¹ Rex designed and built a portable air draw-over apparatus that could be used for relieving pain during the dressing of large wounds as well as for major surgery in the operating theatre. Of course this draw-over apparatus did not require cumbersome medical gas cylinders and he foresaw its use under battlefield conditions with the army in an article published in the *British Medical Journal*.²

Rex Marrett joined the wartime RAMC in 1943. He went ashore on Juno Beach with a Casualty Clearing Station in close support of the D-Day landings in June 1944. The unit dealt with many allied and enemy casualties in the bridgehead during the heavy fighting before Caen was captured and the British broke out of the Falaise pocket. At this stage Rex was promoted to the rank of major and posted to the 6th Field Surgical Team.³ This was a small highly mobile unit consisting of a surgeon, an anaesthetist and ten other ranks. It operated immediately behind the fighting troops. In fact, in the confused and heavy fighting of the Battle for the Ardennes, the Field Surgical Team found themselves ahead of the fighting troops on one occasion. Rex related how he looked out of the window of a school where they had recently set up their equipment, and saw German motorcycle reconnaissance troops passing by on the road outside.

Later the unit handled many casualties resulting from the crossing of the Rhine, and thereafter in the rather more rapid advance to the north through Bremen and ending up in Hamburg on VE-Day.

I was ten years Rex Marrett's junior and found myself, in my turn, in the RAMC, in my case in a military hospital in North Malaya during the terrorist emergency in the nineteen fifties. By coincidence I had the services of (to me then) an aged sergeant operating room assistant who had been with Rex in Northern Europe. He was always polite and had many stories to tell, but I was left in no doubt that my talents did not measure up to those of Major Marrett.

Throughout the Northern Europe campaign Rex used the portable anaesthetic apparatus he had built in St Albans, but he also, more importantly, manufactured another anaesthetic machine by modifying German apparatus designed to facilitate rescue from smoke filled atmospheres. This machine required only a minimal flow of cylinder oxygen.³

Rex Marrett's two devices attracted the attention of senior surgical and anaesthetist officers visiting the Field Surgical Team. They noted that his equipment was far superior for use in the field to apparatus that was officially issued to other units. After return to the United Kingdom in 1945 Rex was relieved of other duties for nine months and asked to design and build a prototype for a field anaesthetic apparatus for the army.³ This machine was to be suitable for use in both base and field hospitals at home and overseas and in all climates. Rex built his all-metal machine with great ingenuity. First he built a hard wood model, and then a brass prototype. Both of these performed satisfactorily in clinical trials. The apparatus incorporated specially designed reducing valves and, for the first time, many features that have since become standard in all anaesthetic apparatus for use with closed and semi-closed circuits with oxygen, nitrous oxide, ether and trichloroethylene and later other volatile anaesthetics. In addition there was a facility for the use of draw-over air-ether if cylinder gases were not available.^{3,4}

The machine was patented by the Ministry of Defence in Rex Marrett's name and manufactured commercially by Airmed Ltd of Harlow.^{3,4} By the time that I was in Malaya in

the nineteen fifties, I was lucky enough to have the benefit of being supplied with a production model of one of Rex's versatile machines. I was especially grateful for the draw-over facility in Malaya during a temporary shortage of cylinder gases due to flooding on the railway on which we relied for supplies.

Rex Marrett's name was placed on a Royal Commission list on awards for wartime inventors. This list also included the names of Frank Whittle of the jet engine and of Bailey of the sectional bridges but whereas Whittle received one hundred thousand pounds, Rex received just four hundred and fifty pounds, with which he purchased a caravan.

The National Health Service

Rex was now one of a number of very experienced and enthusiastic wartime physician anaesthetists who were destined to take over as consultants in the British National Health Service from a largely general practitioner based service when the NHS was inaugurated in 1948.

After the enforced separation of the war Rex Marrett was ready to settle down to family life. However, following demobilisation in 1946, Rex had a further rather unhappy year of separation in London as a civilian consultant to the Army. This appointment was combined with somewhat restricted private practice in the capital with surgeons who often showed a somewhat supercilious attitude towards the emergent specialty of anaesthesia. Rex was then appointed in December 1947 to one of the posts for anaesthetists that more far-sighted Health Authorities like Coventry were creating in anticipation of the start of the NHS in July 1948. The honorarium at that stage was but one thousand pounds per annum, but with the promise of a salaried consultant appointment at the start of the NHS, as well as private practice as the first specialist anaesthetist in Coventry, the situation was favourable. Unusually in the United Kingdom, Rex worked initially and happily with two nurse anaesthetists who had very competently borne the burden of much of the routine anaesthesia in Coventry since the blitz.

Coventry was indeed in a sorry state in 1947 after the wartime devastation due to enemy air raids. As is well known the courage and progressive attitudes and actions of its citizens resulted in the resurrection of that great city, the hospital service had grown and developed, and, with Rex Marrett's forward thinking, the anaesthetic department also prospered.

The advent of the revolutionary anaesthetic agent halothane in the late nineteen fifties led to the publication of careful research by Rex and an account of clinical use of the agent in the closed circuit.⁵ He also developed, in the late nineteen fifties, the Medrex apparatus.⁶ This was designed for a novel technique for outpatient dentistry using oxygen, nitrous oxide and halothane. This technique provided a smooth and pleasant induction without the hypoxia associated with the nitrous oxide and oxygen administrations of that era and presented a relaxed jaw for the operator. By 1963, after five years of use, over 1500 anaesthetics had been administered with this apparatus.⁶

Rex Marrett's national reputation grew. He was elected to Fellowship of the Faculty of Anaesthetists of the Royal College of Surgeons in 1953 shortly after the formation of that body. He became a Past President and Honorary Life Member of the Society of Dental Anaesthetists, a Founder Member of the Hickman Anaesthetic Society, and an Honorary Member of the History of Anaesthesia Society.

Other interests

His love of engineering continued throughout his life. He had a penchant for renovating veteran cars, taking part several times in the London to Brighton run, and when his walking disability finally became too difficult, he designed and built a golf-buggy that he called Percy, in order that he could continue to play golf.

Rex Marrett the man

I have endeavoured to describe the achievements of this great man, but what of his personality. A fellow member of the History of Anaesthesia Society recently described Rex Marrett to me as 'the perfect English gentleman'. This may be considered to be an old fashioned description, but it says it all. He was cultured, courageous, courteous, generous, tolerant of the views of others, and loyal and loving. That is certainly a description of Doctor Rex Marrett who we honour and for whose life we give grateful thanks.

Our sympathies go out to Jackie, his wife of some sixty years. They had two sons, interestingly one is an engineer and the other an administrator in the golfing world.

References

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