## OBITUARY

### DR GORDON JACKSON REES FRCA FRCP FRCPCH
### Pioneer of Paediatric Anaesthesia

Gordon Jackson Rees, known to all his friends as 'Jack', was born on 8 December 1918, a 'Shropshire Lad' from Oswestry on the Welsh border, some 40 miles from Liverpool. He was the second son of a marine engineer, who served in the Royal Naval Reserve in the two World Wars. His mother, also from Salop, was a Miss Jackson, from whom he inherited his second Christian name. His first Christian name derives from his mother's admiration for General Gordon of Khartoum. Jack's elder brother, whose son Martin has recently become Astronomer Royal and received a knighthood, went to Cambridge and then established and became headmaster of a very successful preparatory school in Shropshire.

#### Education

Jack was educated at Oswestry School. Whilst travelling to visit various ships with his father, he assisted in the maintenance of many mechanical devices and became familiar with, amongst other techniques, the measurement of pressure-volume loops, a determination which was subsequently of value in his professional career. Despite his father's hopes that he would follow in his profession, Jack was determined to study medicine, having been inspired by the doctor father of a great friend at school. Apart from cross-country running, (a sport he continued later, being selected for the University team), his scholastic achievements, by his standards, were modest and gave little hint of his later academic brilliance and practical innovative ability. His school leaving grades were satisfactory for entry in 1937 to the 'local' University of Liverpool to study medicine.

During his second year he met a fellow medical student, Miss Elisabeth Schofield, and after they both qualified MB, ChB. in late 1942, they were married and enjoyed an extremely successful partnership for 58 years. Betty has, of course, developed her own medical specialty and is recognised worldwide for achievements in her field. They had four children, one of whom, Andrew, is Regius Professor of Medicine at Aberdeen University.

#### Royal Air Force

Early in 1943 Jack was called up into the Royal Air Force medical branch and served as a station medical officer to a flying boat squadron in Freetown, West Africa. He returned to the United Kingdom in 1945 and was offered a postgraduate course in anaesthetics. He was sent to the Radcliffe Infirmary, Oxford to study under Professor Robert Macintosh and William Mushin. He was then posted to RAF Hospital, Cosford, where he joined Douglas Howat who coached him for the one part Diploma in Anaesthetics, which he easily passed in 1946.

#### Return to Liverpool

Jack was demobilised later that year and returned to Liverpool. Largely due to economic pressure and a desire to utilise his specialist knowledge, he obtained a post in anaesthesia at the

Royal Southern Hospital. He became a Consultant Anaesthetist to the Royal Liverpool Hospitals in 1949. It was at this point that the course of his subsequent career was to be dramatically influenced by two people, Dr (later Professor) Cecil Gray, Consultant Anaesthetist, and Miss Isabella Forshall, a Consultant in Paediatric Surgery, originally described by Jack as 'rather a formidable lady'. With both of these he developed a life-long close friendship.

Cecil Gray, just appointed Reader in the new University Department of Anaesthesia, recognising Jack's tremendous potential, invited him to join the department as a part-time demonstrator. Together they proposed and introduced the revolutionary concept of the 'triad of anaesthesia', using different specific agents to produce a desired effect. This was a far cry from the conventional method at the time, of the use of a single anaesthetic agent. Shortly afterwards Miss Forshall persuaded Professor Gray to second him (at first rather reluctantly) to the Royal Liverpool and Alder Hey Children's Hospitals to develop paediatric anaesthesia. Jack continued to hold Consultant Anaesthetic posts in five adult hospitals because his conscientiousness and expertise were constantly in demand for difficult emergency cases. Gradually over the ensuing years he devoted his professional activities solely to the care of infants and children.

**Paediatric Anaesthesia**

The so-called Jackson Rees technique of paediatric anaesthesia initially developed as a result of his experiences in adult anaesthesia, and an intense desire to humanise the management of children in hospital. Jack gradually introduced a number of important and radical changes. These included heavy premedication, an intravenous technique of induction of anaesthesia (to replace the unpleasantness of open ether induction), the routine employment of muscle relaxants and the use of endotracheal intubation and controlled ventilation by means of a simple adaptation of the Ayre's T-piece with the addition of an open-ended bag and a high frequency of respiration. In 1950, within a year of being appointed to the Liverpool Children's Hospitals, he published a seminal paper in the *British Medical Journal* on neonatal anaesthesia. His technique, which became the yardstick of successful and safe paediatric anaesthesia, was associated with a great improvement in the results of infants and children undergoing surgery, and subsequently permitted the important development of more complicated operations in a variety of surgical fields. Further innovations, particularly related to prolonged intubation in intensive care, were to follow.

This technique soon became known throughout other centres, and resulted in the operating theatres at the children's units in Liverpool being packed with many distinguished paediatric anaesthetists and trainees from around the world, to witness this phenomenon. As a result of these contacts Jack was invited to many national and international meetings. He travelled widely to many centres as a visiting Professor and invited lecturer, was made an honorary member of a large number of prominent learned societies, and was presented with many prestigious awards in this country and abroad. He inspired a large following of devoted trainees throughout the world, and continued to receive visits from many colleagues during his active years of practice, with whom he remained in contact long after he retired.

## Honours

He was awarded the Joseph Clover Medal of the Faculty of Anaesthetists in the Royal College of Surgeons of England, the Frederick Hewitt Medal of the Royal College of Surgeons of England, the Henry Hill Hickman Medal of the Royal Society of Medicine, London, the John Snow Medal of the Association of Anaesthetists of Great Britain and Ireland and the Robert M Smith Award of the American Academy of Paediatrics. He was extremely popular, and became well known as a superb speaker, a witty panellist and a persuasive debater. His writings are a model of lucidity and a pleasure to read, though he confessed that he was a 'reluctant writer'.

He was elected a Fellow of the Faculty of Anaesthetists of the Royal College of Surgeons of England, Fellow of the Faculty of Anaesthetists of the Royal Australian College of Surgeons, Fellow of the Faculty of Anaesthetists of the Royal College of Surgeons of Ireland, Fellow of the Royal College of Physicians of London, and Fellow of the Royal College of Paediatrics and Child Health; 'not bad', as he himself remarked, 'for someone who had sat only one postgraduate degree examination'!

His flair for clarifying complex issues, together with his modesty and courtesy, made him eminently qualified for membership of numerous examining bodies for various university degrees, and a natural President and Chairman of many important local and national committees. He was particularly proud to be a guiding founder member, and later President, of the Association of Paediatric Anaesthetists of Great Britain and Ireland. He attended nearly every annual meeting since its inception in 1973, enjoying particularly the gossip at the bar after the annual dinner. His influence on the development of the speciality was recognised subsequently by his appointment as the first President of the Federation of European Associations of Paediatric Anaesthesia in 1986.

The recognition of Jack's achievements was not confined solely to the field of medicine, and it is of note that among many other honours he was made an Honorary Citizen of the ancient university city of Coimbra in Portugal, a tribute rarely bestowed upon an anaesthetist. Furthermore, in recognition of his contribution to the welfare of children, the Liverpool branch of the Athenaeum club, which celebrated its bicentenary in 1998, chose him as one of five distinguished citizens from the whole of Merseyside, who had contributed both locally, nationally and internationally to the advancement of knowledge and humanity; a unique award for a unique man.

## Retirement

Jack retired from anaesthetic practice in 1983, but was quickly invited to be guest Professor of Paediatric Anaesthesia in the Erasmus University of Rotterdam for a year.

Fortunately for his colleagues and for posterity, Jack's life was recorded on videotape in 1997-8 during a series of excellent interviews expertly conducted by Dr Max Blythe of the Educational Unit of Oxford Brookes University. The tapes span over 4 hours and tell in explicit detail an intriguing and spellbinding story. The interviews highlight his modesty and the clarity of explanation of his innovations, making them all appear extremely very simple; but they could

only have occurred as a result of a comprehensive fundamental knowledge of medicine coupled with astute clinical acumen and observation.

**Conclusion**

The revolutionary improvements that Jack had initiated laid the foundation for a practice of anaesthesia in infants and children, which could not have been envisaged 50 years ago. He loved life and fellowship, and his wide circle of friends have fond recollections of many enjoyable and memorable occasions. With his high intelligence, wisdom and ability to solve seemingly impossible problems, he could have achieved great success in any chosen field. He was generous, genial and genuinely interested in everyone, and gleefully admitted to being 'a social animal'. He bore his last illness with characteristic good humour and immense fortitude. He will be sadly missed by the many who had experienced his friendship.

Dr Jackson Rees died peacefully at home on Friday 19 January 2001.

**Gordon H Bush**

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## An Extract from Mrs Beeton's Book of Household Management[1]

*First published in 1861. An enlarged edition was published by the Clarendon Press in 1982 and reprinted in 1984. Mrs Beeton married a publisher and died in childbirth at the age of 26.*

2462. There is another condition of what we may call 'mute births', where the child only makes short ineffectual gasps, and those at intervals of a minute or two apart, when the lips, eyelids, and fingers become a deep purple or slate colour, sometimes half the body remaining white, while the other half, which was at first swarthy, deepens to a livid hue. This condition of the infant is owing to the valve between the two sides of the heart remaining open, and allowing the unvitalized venous blood to enter the arteries and get into the circulation.

2463. The object in this case, as in the previous one is to dilate the lungs as quickly as possible, so that, by the sudden effect of a vigorous inspiration, the valve may be firmly closed, and the impure blood, losing this means of egress, be sent directly to the lungs. The same treatment is therefore necessary as in the previous case, with the addition, if the friction along the spine has failed, of a warm bath at a temperature of about 80°, in which the child is to be plunged up to the neck, first cleansing the mouth and nostrils of the mucus that might interfere with the free passage of air.

2464. While in the bath, the friction along the spine is to be continued, and if the lungs still remain unexpanded, while one person retains the child in an inclined position in the water, another should insert the pipe of a small pair of bellows into one nostril, and while the mouth is closed and the other nostril compressed on the pipe with the hand of the assistant, the lungs are to be slowly inflated by steady puffs of air from the bellows, the hand being removed from the mouth and nose after each inflation, and placed on the pit of the stomach, and by a steady