

■ OBITUARY

Michael Alexander Reykers Freeman

BA (Cantab) 1953, MB BCh (Cantab) 1956, FRCS 1959, MD (Cantab) 1964, MD Hc (Swe) 1992 - (1931 to 2017)

G. Scott

From The British Editorial Society of Bone & Joint Surgery, London, United Kingdom



Michael Alexander Reykers Freeman

Surgeon, inventor, bioengineer, role model, mentor and friend

Michael Freeman was a remarkable, accomplished man with an outstanding intellect and a sparkling wit. His father died when he was young and Michael was sent to board at Stowe School from 1945 to 1950. There he excelled, developing a life-long thirst for knowledge and gained an Open Scholarship and Closed Exhibition to Corpus Christi College, Cambridge. He achieved First Class Honours in the Natural Science Tripos in 1953 before proceeding to the London Hospital Medical College, completing his clinical studies in 1956. At Cambridge, he had met his life-long friend John Insall who accompanied him to London. Together they shared an interest in knee arthroplasty. After graduation, he wasted no time passing his FRCS in 1959 and undertook orthopaedic training at the London, Westminster and Middlesex Hospitals.

He completed an MD thesis on Ligamentous Injuries in 1964. His findings regarding the relationship of mechanoreceptors on the contraction of the gastrocnemius (in the cat) remain to this day the foundation of non-operative rehabilitation of the ligamentous injuries at the ankle. That year he received the Robert Jones Medal from the British Orthopaedic Association. He also established a research partnership with Prof SAV Swanson at Imperial College, becoming Co-Directors of the Biomechanics Unit in the Department of Mechanical Engineering at Imperial. In 1968, he was an ABC Fellow and appointed to the London Hospital on an eight-eleventh consultant contract, allowing him to continue his research on arthritis and joint prostheses at Imperial.

He engaged in pioneering work with joint replacements for the foot and ankle, which he was later to abandon with disappointment that these could not be made to work with the biomaterials available. His interests progressed with hip and knee arthroplasty. This resulted in the first condylar knee arthroplasty to be implanted at the London Hospital in 1969. The early 1970s saw the arrival of the Imperial College London Hospital (ICLH) hip resurfacing, using high density polyethylene acetabular components and cobalt chrome heads. With every new development, he was meticulous in documenting changes and recording the outcome of every patient he treated. From this constant scrutiny, he made modifications to rectify any deficiencies he identified. By the early 1980s, he had concluded that hip resurfacing was unreliable. He then proceeded to develop a full neck retaining total hip prosthesis.

He published his findings and became a magnet for fellows from across the world who wished to study with him. At no time did he shy away from reporting any unsatisfactory result in order to prevent others from repeating any mistakes. In 1982, he left Imperial and transferred his research to the Bone and Joint Research Unit, in the newly constructed Arthritis and Research Council building at the London Hospital Medical College.

He found time to serve on grant-awarding committees and was a member of the Board of Governors of the London Hospital and the Brent and Harrow Area Health Authority. He served on the Editorial Board of *The Journal of Bone & Joint Surgery [Br]* and the *Journal of Arthroplasty* where he became the first European Editor-in-Chief of JOA from 1996 to 2001.

From 1983 to 1985, he was President of the International Hip Society. In conjunction with Hugh Phillips and Robin Ling, he established the British Hip Society, serving from 1989 to 1990 as its first President. He was also President of the British Orthopaedic Association from 1992 to 1993. Acting with Jacques Duparc, he helped establish the European Federation of National Associations of Orthopaedics and Traumatology, serving EFORT as its second President from 1994 to 1995.

In 1996, he retired and remarked that throughout his career he had never really understood how the knee worked! The opportunity to explore this omission arose through a chance collaboration with the Charles University in Prague. Working with Dr (now Professor) Vera Pinskerova, he embarked on a programme of anatomical and MRI studies of cadaver and living knees, identifying the three-dimensional shapes of the articular components of the joint. Over several years with co-workers, he published in detail the mechanism of lateral femoral rollback and medial femoral stability. This reinforced his opinion that a stable knee prosthesis should be designed with a medially-spherical femoral condyle to mate with matched tibial concavity, while the lateral compartment should remain unconstrained. These features are now incorporated into certain manufacturers' designs.

Throughout his career, he received numerous awards in recognition of his contributions to orthopaedics, including Honorary Fellowship of the BOA in 2003 and Life Membership of EFORT in 2007. Those who worked with him held him in the highest regard, not only for his scientific mind and clinical work, but also for his gentle bedside manner and recognition that sufficient time must be provided to understand the patient's complaint and ensure they understood the limitations of any intervention. If things had not gone to plan, he would be the first to offer an apology and enquire if they had any ideas how they might wish to have things rectified. His knowledge and charm were prominent at scientific congresses, where he was in demand as a Chairman as he could stimulate discussion after most presentations with incisive comments. In an awkward moment, he could defuse a situation with an amusing observation.

Michael is survived by his third wife Patricia, his six children and 11 grandchildren. He will be greatly missed by his family but also his extended family of former trainees and fellows, as well as the whole orthopaedic community. His contribution will live on through his publications and inventions, and hopefully the values he has instilled in those who follow him.

■ G. Scott
The British Editorial Society of Bone & Joint Surgery, 22 Buckingham Street, London WC2N 6ET, UK

Correspondence should be sent to Professor F. S. Haddad; e-mail: editorbjj@boneandjoint.org.uk

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