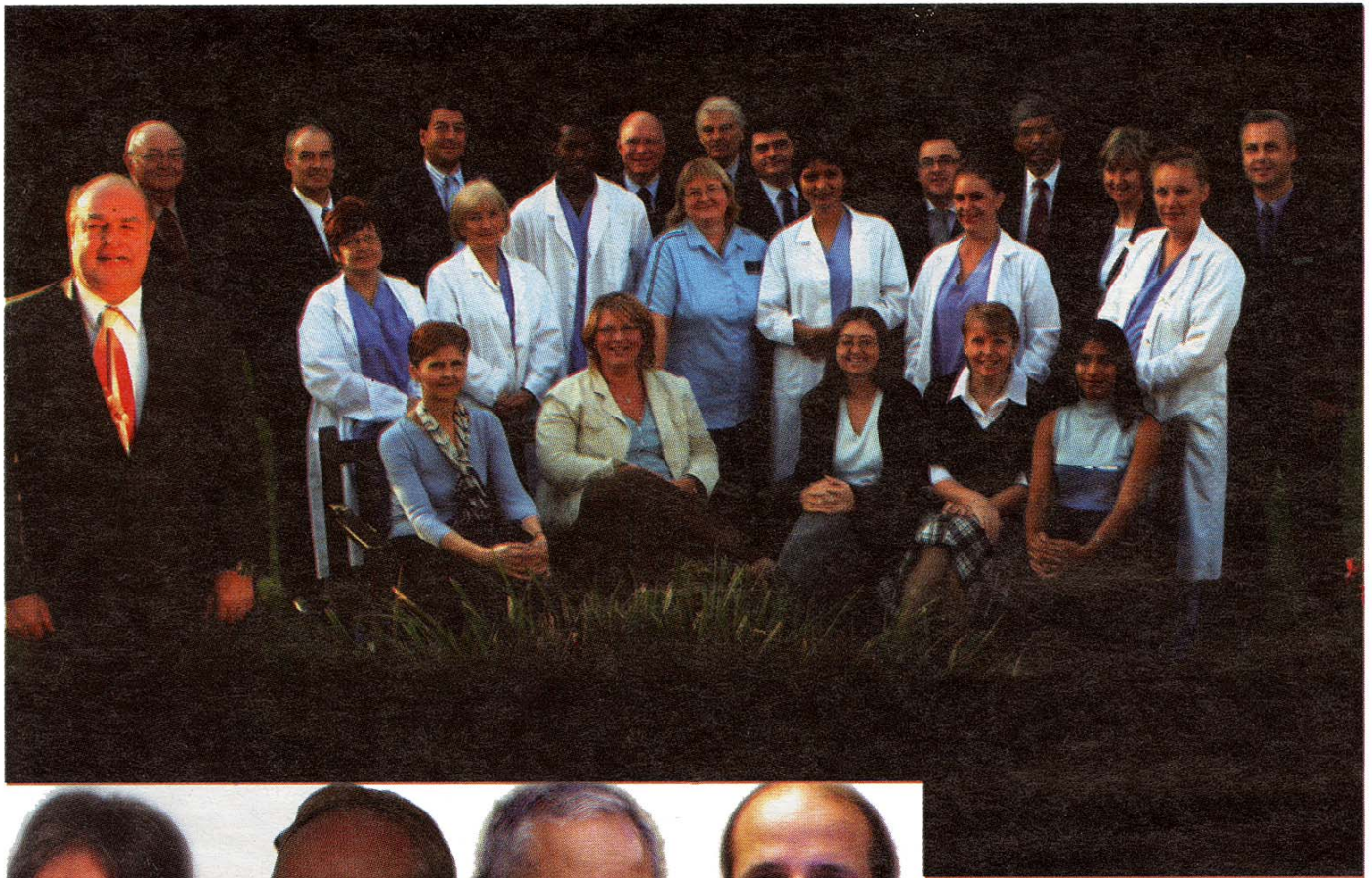


3 NOVEMBER 2005

HOSPITAL DOCTOR



HOSPITAL TYPE:
Acute, independent, not for profit



POPULATION SERVED:
Patients treated worldwide



TEAM:
Team leader is Mr Derek McMinn (far left, top picture).
Non Birmingham-based consultants (left)

MR DEREK McMINN & TEAM

Birmingham Nuffield Hospital

Challenge

Hip replacements have revolutionised treatment of hip arthritis in the elderly for the past 40 years, but numerous studies have confirmed high failure rates in younger patients. Hip resurfacing, as opposed to replacement, was an attractive concept. The first attempts in the 1950s using Teflon implants failed and unsatisfactory materials troubled resurfacing developments over the subsequent 40 years. Metal-on-metal total hip replacements had been tried in the 1960s but were not pursued for fear of generating high friction.

Action taken

Mr McMinn observed that historic metal-metal joints functioned well for 20-30 years with no evidence of excessive wear. He took the best features of these joints and led a team of engineers to design a resurfacing prosthesis that had the potential to withstand adverse conditions.

Several issues, including optimising implant design, metallurgy and perfecting secure fixation to bone, had to be addressed. Mr McMinn then developed a successful surgical technique. He demonstrated the success of resurfacing in a large group of young, active patients who were at highest risk of failure with hip replacements and trained other surgeons to do the same. Research aimed at further improving the device and monitoring its efficacy and safety is ongoing. His efforts mean young active patients with end-stage hip arthritis are given a new lease of life and are able to return to a wide range of sporting activities.

Achievements

- Developing a successful hip resurfacing implant and the surgical method.
- Performing over 3,000 hip resurfacings on patients from the UK and 40 other countries, including Hong Kong, New Zealand and North America, as well as patients from Europe. Mean age of patients is 53 years.
- Training surgeons from all over the UK and 23 countries abroad and recently obtaining approval from the FDA advisory panel in the US to start training surgeons and performing the procedure there.

THE JUDGE'S COMMENT

'Against all odds and conventional wisdom, Mr McMinn's team has rewritten an important chapter of the modern orthopaedic textbook. This innovative approach to hip resurfacing procedures has benefited countless patients globally and gained his team an international reputation. Mr McMinn has invigorated a multiprofessional group of dedicated technologists, bio-engineers, metallurgists and other medical researchers to form a formidable team'

MEET THE TEAM

Lead consultant: Mr Derek McMinn • Development and device optimising team: Mr Tim Band, Prof Anthony Unsworth, Mr John Metcalf, Prof Tom Bell • Scientific monitoring: Prof Paul Pynsent, Prof James Richardson, Dr Arne Lundberg, Dr Alison Davenport, Mr Joseph Daniel, Ms Hena Ziaee • Clinical and surgeon training: Dr Jonathan Freeman, Mr Chandra Pradhan, Mr David Stoten and The Nuffield Hospital Theatre Team