



OBITUARIES

Harry John Espiner: medical innovator who invented the Espiner bag

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Harry Espiner was a distinguished surgeon, researcher, lecturer, and medical innovator who also designed equipment used by surgeons worldwide. He performed some of the earliest laparoscopic surgery in the UK and developed a special retrieval sac, the Espiner bag, used in keyhole operations such as gallbladder removal. He was always “pushing at the frontiers of innovation,” say colleagues, having also initiated research into the harmful effects of starch powder used in surgical gloves.

Espiner, a New Zealander, arrived in the UK in the late 1950s as a well regarded surgical trainee and went on to have a distinguished career as a consultant surgeon at Bristol Royal Infirmary and lecturer at the University of Bristol. He became a pioneer in laparoscopic cholecystectomy and “one of the very first surgeons to take on the new technique in the south west region,” says Alan Roe, who worked with him as a senior registrar and co-researcher. He was also among the first in the world to remove a cancerous tumour of the colon solely by minimal access surgery techniques.

Keyhole surgery

The feasibility of keyhole surgery for gallbladder removal was being demonstrated abroad from the late 1980s. “Harry was quick to appreciate the potential offered by this new technique,” says Keith Eltringham, his surgeon colleague for some 25 years (they were known as the “double E” firm). “He organised a sabbatical to the US to learn the method first hand and gain some practical experience in their laboratories.” But when he returned to the UK, not all in authority were convinced it was a viable alternative to conventional surgery and initially he had to borrow the equipment he needed to get started. He presented the results of some early cases at the Royal Society of Medicine in 1991.

Relatively early on, a problem was encountered when the gallbladder ruptured during extraction through the small incision in the abdominal wall with spillage of its contents, bile and stones, into the wound or back into the abdomen. “It became clear that it would be an advantage to place the gallbladder into a bag within the abdomen before extraction, so that any spillage would be contained in the bag,” says Eltringham.

Espiner designed prototypes in his small home workshop but none proved completely satisfactory. After a theatre nurse

suggested that the material used for hot air balloons might have the strength and flexibility required, he explored the idea with Bristol based company Cameron Balloons and teamed up with them to design and produce a retrieval bag. “They used ripstop nylon,” says Roe. “Large stones could be broken down in the sac to help minimise the size of the laparoscopic port sites.” As keyhole surgery developed to embrace other disciplines, different bags were made to accommodate a wide range of organs on which surgery was necessary.

Espiner Medical

Espiner continued his developmental work up to and after retirement from surgical practice, designing instruments for use in laparoscopic surgery and retrieval sacs. He formed a company, Espiner Medical, which was a fitting and exhilarating second career for him, say friends.

Espiner had graduated from the University of Otago Medical School in 1955 and did an internship at Christchurch Hospital. He gained a distinction in the primary FRCS examination.

In the UK, he worked with Reginald Murley at St Albans Hospital and was appointed surgical research fellow in Milnes Walker’s University Department of Surgery in Bristol, investigating regional chemotherapy for head and neck cancer. He was awarded the Moynihan prize of the Association of Surgeons of Great Britain and Ireland in 1963.

He did further surgical training in Bristol and hospitals in the south west region and while working in Exeter met his future wife, Antonia (“Toni”), a South African nursing sister, to whom he was married for 55 years.

He was appointed as consultant surgeon to the Bristol Royal Infirmary and Southmead Hospital in 1968. In the 1980s, Espiner initiated an investigation into the harmful effects of starch powder, used at that time to aid the donning of surgical gloves. A small number of patients had a delayed hypersensitivity reaction to the powder during their recovery, resulting in abdominal pain with signs of peritonitis mimicking a surgical emergency. Espiner and others published work that emphasised the need to develop a powder free glove. Latex lined gloves, obviating the need for powder, were the obvious solution but some crudely manufactured versions felt like

“gardening gloves” to surgeons who desired more “tactile discrimination.” Espiner and Eltringham were among the panel of surgeons to test and trial gloves made by the London Rubber company, which proved a breakthrough in the UK and were widely adopted. In 2015 Espiner Medical was incorporated into the Medical Devices division of Fannin UK.

Throughout his career, Espiner taught large numbers of senior house officers, registrars, and senior registrars, many of whom have paid tribute to his kindness, diagnostic and surgical skills, energy, and enthusiasm. He developed dementia in later life.

Toni died after a long illness in August 2019. He leaves his five children, Joanna, Claire, Mark, Tom, and Charlotte.

Biography

Harry John Espiner (b 1932; q Otago, New Zealand, 1955; FRCS Eng, ChM Bristol), d 16 February 2020

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