

# Doctor Jacques-Émile Rioux: A Canadian Pioneer of Gynaecological Laparoscopy

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The idea of performing laparoscopy is attributed to Georg Kelling, who, in 1901, visualized the peritoneal cavity of a dog after insufflation of air and use of a cystoscope.<sup>1</sup> In the 1920s, internists were the first physicians to perform laparoscopy routinely with the introduction of a crude telescope into an abdomen, often distended by ascites, or after distension with room air. They occasionally even reached a diagnosis!

Later, in 1939, Dr Richard W. TeLinde at the Johns Hopkins Hospital in Baltimore introduced a telescope into the peritoneal cavity through the vagina with the patient in the lithotomy position, but the presence of small bowel greatly reduced visualization and access to the genital organs, and he subsequently abandoned the technique.

A few years later, Dr Albert Decker in New York had the idea that by positioning the patient in the knee-chest position the visibility would be increased. He was correct, and with this improvement, the procedure of culdoscopy became established.<sup>2</sup> Culdoscopy became a frequently performed procedure in most university hospitals across the United States, including the Johns Hopkins University Hospitals in Baltimore.

Unfortunately, the positioning of the patient for culdoscopy was difficult and uncomfortable. Moreover, the surgical procedures that could be performed by the culdoscopic approach were limited until M.J. Clyman<sup>3</sup> devised instrumentation allowing the performance of more procedures.

In 1967–1968, having completed training in Quebec and subsequently at Johns Hopkins, Dr Jacques Rioux went to Paris to study with Dr Raoul Palmer, who had pioneered a new technique called “coelioscopie” at the Hospital Broca. At this time, Dr Palmer in France and Dr Kurt Semm in Germany were becoming very well known for their contributions to gynaecological endoscopy. In addition to



identifying the indications and contraindications for endoscopic surgery and the procedures that could be safely carried out, they designed many new instruments for these procedures. Fascinated by the technique, Dr Rioux developed his laparoscopic surgical skills and, before leaving France in 1968, bought a Wolf telescope, a light source, and Panginor insufflators.

Before returning to Quebec, Dr Rioux made his way via New York to Baltimore to visit his professors and former resident colleagues. When they learned that he carried with him all the instruments necessary to perform laparoscopy, they identified some patients in need of surgery, sterilized his telescope and watched him carry out the first laparoscopies at Johns Hopkins in May 1968.

In September 1968, Dr Rioux was recruited by the Department of Obstetrics and Gynecology at Laval University. He performed laparoscopies at the Jeffery Hale and Misericorde Hospitals, and he was invited to perform gynaecological laparoscopies and discuss indications for the procedure and operative techniques at the Royal Victoria Hospital in Montreal. Dr Anthony Raymont, secretary of the Canadian Society for the Study of Fertility, asked him to present at a conference in Toronto in June 1969 on "Laparoscopy in Gynaecology," and his presentation resulted in his receiving the Wyeth Award. He was invited to repeat his presentation at the Pacific Coast Fertility Society in November 1969.

During the June 1970 meeting of the Canadian Society for the Study of Fertility, Dr Rioux held the first Canadian workshop on gynaecological laparoscopy. Dr Albert Yuzpe from the University of Western Ontario was part of this very first course and later joined the faculty to produce annual courses in diagnostic and operative gynaecological laparoscopy as a joint venture between Université Laval and the University of Western Ontario. These courses were regularly overbooked. In 1971, Dr Rioux joined Dr Jordan Phillips, Dr Richard Soderstrom, and Dr Louis Keith in founding the American Association of Gynecological Laparoscopists, and Dr Rioux served as President of this Association in 1978.

Laparoscopic procedures and instrumentation continued to evolve. In response to an accidental bowel burn that occurred during a tubal coagulation using a unipolar Palmer forceps, Dr Rioux designed a bipolar forceps to reduce the occurrence of similar accidents.<sup>4,5</sup> In June 1973, he reported his experience with this new instrument. Unfortunately,

production and distribution of the "Rioux Bipolar Tubal Forceps" was unduly delayed by the government agency that was supposed to facilitate it. Thus, despite the fact that patents were secured for Canada, the US, and 25 other countries, the patents were not properly defended, and instrument makers have been able to make and market bipolar forceps with impunity.

Dr Rioux's first publication in 1968 predicted the process of in vitro fertilization in the cow, including in vitro maturation of oocytes.<sup>6</sup> Within the veterinarian community, he is credited for having developed the use of laparoscopy under local anaesthesia in large mammals, particularly the cow. Dr Rioux and his colleague Raymond Lambert PhD were the first to produce calves by means of in vitro fertilization on a regular basis, and they subsequently opened the first IVF clinic (for humans) in Canada.

After 32 years (1968–2000) doing research, clinical work and teaching at Université Laval, Dr Rioux has retired and is now Professor Emeritus in the Department of Obstetrics and Gynecology.

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