

## HISTORY OF LAPAROSCOPY

*Part of "CHAPTER 161 - LAPAROSCOPY AND LAPAROTOMY"*

The technique of accessing the abdomen through small incisions to diagnose and treat abdominal disease is today commonly referred to as laparoscopy (Greek *lapara*, the flank; *skopein*, to view). In 1901, G. Kelling performed the first minimally invasive examination of the abdomen using a cystoscope in a dog.<sup>3,4</sup> A decade later, H. Jacobaeus reported the safe utilization of laparoscopy in patients to diagnose syphilis, tuberculosis, cirrhosis, and malignancy.<sup>5</sup> The German hepatologist H. Kalk introduced the oblique-viewing laparoscope for diagnosis of liver diseases and the concept of using accessory ports for biopsy.<sup>6</sup> Laparoscopic access was simplified by the introduction of the Veress spring-loaded needle in 1938, which was used to insufflate the abdomen with air.<sup>7</sup> Subsequently, carbon dioxide (CO<sub>2</sub>) was used to create the pneumoperitoneum necessary to have a working space. Fiberoptics brightly illuminated the abdominal cavity with superior lighting, and as instruments for grasping, cutting, and cauterization became available, simple therapeutic procedures were possible.

The modern era of video laparoscopy began with the development of the computer-chip television in the 1980s. With the laparoscope attached to a television camera, the resulting images could be transmitted to a video monitor, and the whole operating team could visualize the operative field. No longer was the surgeon restricted to "scope holder." With an assistant

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delegated as camera holder, the surgeon was free to operate with both hands and perform more difficult procedures. P. Mouret performed the first laparoscopic cholecystectomy in France in 1987,<sup>8</sup> followed by Reddick and Olsen<sup>9</sup> and McKernan and Saye<sup>10</sup> in the United States in 1988.

The appeal of small incisions and claims of less pain, shorter hospitalization, and speedier recuperation after laparoscopy were portrayed by the media as "bellybutton," "Band-Aid," "Nintendo," and "minimally invasive" surgery.<sup>11</sup> Before randomized prospective studies could verify the proposed benefits of laparoscopy, general surgeons embraced the new methods, and other operations were performed using laparoscopic guidance. Hospitals invested in costly laparoscopes, monitors, and instruments. Surgical societies, journals, and even postgraduate fellowships were established to teach, validate, and credential surgeons in emerging laparoscopic procedures. Today, detailed outcome studies are being performed and reported to justify the outcomes and costs of these new procedures relative to alternative treatment strategies. Thus far, only laparoscopic cholecystectomy has succeeded in becoming the gold standard approach,<sup>12</sup> but many other laparoscopic abdominal procedures are rapidly gaining acceptance (Table 161-1).

<b>TABLE 161-1 Current Status of Laparoscopic Procedures</b>
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