



INTRODUCTION

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Throughout the history of general surgery, perhaps no single general surgical procedure has had as much impact as the introduction of laparoscopic cholecystectomy. The procedure was first performed in the United States in 1988 and, remarkably, in less than 6 years it has become the procedure of choice for the treatment of symptomatic cholelithiasis (**Bailey and Flowers, 1995**).

The rapid growth of laparoscopic general surgery has been fueled by a series of important simultaneous advances in technology. Recent dramatic improvements in video technology and continued development of laparoscopic instrumentation have allowed laparoscopic surgeons to proceed wherever their imagination has led them (**Bailey and Flowers, 1995**).

The widespread acceptance of this technique has been largely propelled by public awareness that laparoscopic surgery is associated with less pain, shorter hospital stay, quicker return to normal activities, and better cosmetic results (**Mori et al, 1995**).

Laparoscopic surgery has two real problems which are the cost of the procedure, as the equipment are indispensable and should be available before proceeding. The second problem is the necessity of skilled training. However, the increased cost should be compared with the gain associated by the shorter hospital stay and the quicker return to full activity by the majority of patients (**Mori et al, 1995**).

Laparoscopy is an innocuous rapid and elegant procedure in the hands of a

well trained specialist. It can also be a source of errors and accidents if been put in the hands of those without proper training and proper spirit of continuous attention to all technical details, indispensable for total safety (**Schirmer, 1994**).

Laparoscopic complications may be classified into those common to all surgical interventions, which include, anesthesia complications, bleeding, infection and postoperative complication. Complications which are specific for laparoscopy are pneumoperitoneum mishaps, penetrating injuries caused by the pneumoperitoneum needle and trocar, and coagulation injuries during therapeutic procedures (**Nord, 1992**).

Cardiac arrhythmias, changes in pulmonary function, gas embolization subcutaneous emphysema, and peritoneal insufflation all are complications of pneumoperitoneum (**Myles, 1989; Bard and Chen, 1990; Nord, 1992**).

Also penetrating injuries during laparoscopy include bleeding from the abdominal wall, perforation of large vascular structure, penetration of the stomach and intestinal perforation (**Johns, 1993**).

While coagulation injuries involve skin burns, explosion of volatile gases or liquids and electrocution of both staff and the patient in addition to these problems, there are reported cases of electrocution injury during laparoscopy involved most intra-abdominal organs (**McAnena and Willson, 1993**).

In addition to these complications there are many others related to the procedure itself as common bile duct injury during laparoscopic cholecystectomy (**McMahon et al, 1995**), hydrocele after laparoscopic Varicocelelectomy (**Szabo and**

Kessler, 1984), postoperative pain which follows laparoscopic appendectomy (Zaninotto et al, 1995) .