Flawless and smooth completion of laparoscopic surgical procedures requires complete understanding of equipment, techniques, and regional anatomy. This chapter details some of the basic principles common to all laparoscopic surgical procedures. It should be read and thoroughly understood as a background to the technical chapters that deal with specific surgical procedures.

EQUIPMENT AND SUPPLIES

A few minutes of thought and planning may save a lot of time once the operation begins. Ascertain that all needed equipment is present and in working order and that the room is properly set up before scrubbing. For most laparoscopic equipment and supplies there is a choice of manufacturers. Apparently similar devices frequently have subtle points of difference when compared to other brands. Thus it is crucial for surgeons to be familiar with the particular brands in use in their own hospitals.

A troubleshooting guide, such as the one produced by the Society of American Gastrointestinal Endoscopic Surgeons (SAGES) facilitates finding and fixing problems with the insufflator, the light source, the video equipment, cautery, suction, and other complex devices. Such a chart may be laminated and affixed to the laparoscopy cart for ready reference. This is particularly important when laparoscopy is performed during the evening or night shift (e.g., for acute appendicitis) with personnel who may not be familiar with the equipment and its setup.

ROOM SETUP

The patient position and details of the room setup vary depending on the procedure to be performed. Laparoscopic surgery is extremely dependent on optimum patient and equipment position. Whereas during an open procedure the surgeon is free to move from side to side and vary his or her stance even from moment to moment to assume the ergonomically best position, the laparoscopic surgeon is limited by port placement. Think of the laparoscope as the surgeon’s eyes, and the two operating ports as the left and right hands. Although it is indeed possible to switch the laparoscope from one port to another, poorly positioned port sites limit visibility and access.

Plan the room setup so the surgeon can stand facing the quadrant containing the anticipated pathology. For example, laparoscopic cholecystectomy is comfortably performed by a surgeon standing to the patient’s left, facing a monitor positioned at the patient’s right shoulder (Fig. 8-1). Surgery around the esophageal hiatus is best performed with the patient in a modified lithotomy position, the surgeon standing behind the patient’s legs, and the monitor at the left shoulder or head of the bed (Fig. 8-2). Even a relatively minor detail such as whether the arms are tucked at the side or placed out on arm boards becomes significant. In the technical chapters dealing
Choice of Laparoscope: Straight Versus Angled?

A straight (0°) laparoscope is easy to use and may be adequate for basic laparoscopic procedures in which the scope is easily brought to an en face view from a standard umbilical port site. The angled laparoscope allows the surgeon to view a structure from several viewpoints through a single trocar site and thus provides good flexibility. For some laparoscopic procedures, such as laparoscopic cholecystectomy, Nissen fundoplication, and inguinal hernia repair, an angled laparoscope is virtually a necessity. Most commonly, laparoscopes with 30° or 45° angles are used.

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with specific laparoscopic procedures, the important points relevant to each operation are explained. For now, suffice it to say that no detail is unimportant.

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