

tient is then transferred to the post anaesthetic unit.

Recovery from anaesthesia is the same as for the traditional cholecystectomy. The signs and symptoms observed are the same for any abdominal surgery. The patient is returned to the surgical unit.

Currently, if the patient is the first surgical candidate of the day, the patient is permitted clear fluids in the late afternoon and ready for discharge the following day by early afternoon.

Nursing implications

New procedures are a difficult time of adjustment for both surgeons and nurses. The similarity between gynecological laparoscopy and laparoscopic cholecystectomy makes instruments and equipment somewhat similar. The support and continued presence of detail representatives of various companies has helped the learning process of both physicians and nurses. After eight of these procedures and a technical inservice, the nursing staff is now totally responsible for equipment set-up and instruments. However, the sales representatives are only a phone call away.

We are still discovering idiosyncrasies about how the equipment works. We had been having trouble deciding why the cautery cable, a single pronged device, would work only in certain rooms. One circulating nurse new to this procedure pointed out that there were two different models of ESU in the rooms we use. For one unit, she pointed out, we need an adaptor and, for another, we do not. This type of input helps all the nurses to better understand the working of the equipment. In this process, we are getting faster and more efficient, and feeling more comfortable with set-up and equipment.⁽⁶⁾

As clinical instructor, I had been involved with the first cholecystectomies performed in research labs. Once in the operating room, the same nurses were initially involved in the first half dozen cases. This provided some continuity and stability to the situation. After an inservice conducted for the whole unit, new nurses are being rotated into the room on a daily basis in order for all the nurses to be introduced to and become comfortable with, the new procedure. An inservice was also held for the people responsible for the care and cleaning of the equipment. Despite being familiar with the care and cleaning of telescopes, there were a few issues that were clarified, thus demonstrating the importance of constant review.

Currently, the surgeon is working with a variety

of instrumentation, which can change from case to case as availability changes. This equipment is currently so in demand that there is a six month to one year back order situation. The disposable equipment is also in great demand and becoming available from a variety of sources.

Conclusion

Laparoscopic cholecystectomy is a viable option to traditional cholecystectomy for a select population. The decrease in post operative pain and ileus, and decrease in hospitalization and recovery time make it an attractive alternative both to patients and to hospitals in these times of limited resources. ■

References

1. Cuschieri, A., El Ghany, D., & Holly, M.P. (1989). "Successful chemical cholecystectomy: a laparoscopic guided technique." *GUT*, 30 (12), 1786.
2. Cuschieri, A., Berci, G & McSherry, C.K. (1990). Laparoscopic cholecystectomy." *The American Journal of Surgery*. 159(3), 273.
3. Gruendemann, B.J. & Meelan, M.H. (1983). *Alexander's Care of the Patient in Surgery* (7th. ed). Toronto: The C.V. Mosby Company.
4. Jackson, D.C., Martin, T., Evans, M. & Rubis, P.A. (1990). "Endoscopic Laser Cholecystectomy." *AORN Journal*. (51(6), 1546-1552.
5. McKernan, T.B. & Sage, W.B. (1990). "Laparoscopic General Surgery". *Journal of the Medical Association of Georgia*. 70(3).
6. Reddick, E.J. & Olsen, D.O. (1990). *Laparoscopy for the General Surgeon*, by Karl Storz & Co., Germany.
7. Reddick, E. & Olsen, D.O. (1989) "Laparoscopic laser cholecystectomy. A comparison with mini-laparotomy cholecystectomy." *Surgical Endoscopy*. 3(3), 131-133.
8. Swazuk, K. & Mueller, B. G. & Daly, C. J. (1989). "Laser cholecystectomy." *AORN Journal*. 50(5), 998-1005.
9. Wilson, J. P. (1990). "Commentary on laparoscopic cholecystectomy." *J. Med. Assso. of Georgia*. 79(3), 149.

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Laser Surgery

Laser laparoscopic cholecystectomy

In the "traditional" removal of a diseased gallbladder (cholecystectomy), the required main incision (a right upper quadrant incision) requires that the patient, because of the pain associated, not move or breathe deeply after the procedure. This could complicate the recovery process if infection or respiratory problems become evident.

The CO₂, contact Nd:YAG, argon, and frequency-doubled YAG lasers have been used to excise the gall bladder. Because of the precision of the laser, adjacent tissue damage is minimized. Post-operative drains are removed earlier because there is not as much drainage resulting from the laser's sealing effects. Recovery is similar to the conventional procedures except for reports of quicker recovery.

Laser laparoscopy

Recently the laser has been used through an operating laparoscope to excise the gall bladder. This less invasive procedure is becoming more successful as more refinements are being made. Laser laparoscopic cholecystectomy is beginning to gain more attention and popularity.

The patient selection criteria must be followed strictly to ensure the success of the procedure. The patient must show documented stone formation in the gallbladder, no evidence of common bile duct disease or acute cholecystitis, and no previous abdominal or pelvic surgery.

Danger of organ perforation

General anaesthesia is administered to the patient and a nasogastric tube and urinary catheter are placed to decompress the stomach and bladder, respectively. This action decreases the chance of or-

gan perforation during the laparoscopic procedure.

The patient is placed in the Trendelenburg position (head down) to allow the organs to move towards the chest. A small umbilical incision is made and an insufflation needle inserted to fill the abdominal cavity with CO₂ gas. The needle is removed when the insufflation appears to be adequate. A trocar and sheath are inserted and the trocar removed to allow introduction of the laparoscope through the sheath. The light cord, video camera, suction, and insufflation hose are connected to the sheath or laparoscope.

The physician examines the pelvis and abdomen and identifies landmarks for reference. Other stab wounds are made at strategically placed positions to allow for the passage of other necessary instrumentation during the procedure.

The patient is then placed in reverse Trendelenburg (feet down) to allow the transverse colon to move away from the surgical field. Forceps and laser energy are used to dissect any peritoneal attachments or adhesions from around the cystic duct or artery. These structures are doubly ligated and divided with the laser energy.

Laser dissection

The gall bladder is grasped with tension used to provide traction during the dissection from the liver bed. A long needle is then inserted into the gall bladder for decompression.

The laparoscope is then moved from the larger umbilical port to another side port. The gall bladder is grasped and then gently pulled through the umbilical port sheath.

If the presence of a large gall-stone prevents the gall bladder from being removed through the sheath, then the gallbladder can be pulled through

the umbilical incision following sheath removal.

The liver bed is hemostatically coagulated with laser energy and then irrigated with an antibiotic solution. Before the completion of the procedure, the abdomen is decompressed by gentle pressure to remove the insufflated gas. Many times a post-operative drain is not needed. All skin incisions are then closed in the traditional manner.

Post-operatively, the patient may experience shoulder pain, especially if any of the insufflation gas escapes into the peritoneal space. This can be controlled with mild analgesics. Patients are usually discharged on the first or second post-operative day. Most will be able to return to unrestricted work within one week following the procedure.

Advantages

The laser offers distinct advantages over conventional methods when used to remove the gall bladder through the laparoscope. Patients are able to be discharged from the hospital sooner and return to work more quickly, have an easier post-op course, and have a better abdominal cosmetic appearance.

Disadvantages

The main disadvantage associated with laser cholecystectomy is that the physician must become a skilled laparoscopist. The potential complication of accidentally impacting the intestine with the laser energy must be avoided during the laparoscopic procedure. Bleeding also is harder to control through a laparoscope than it is through traditional cholecystectomy techniques.

Conclusion

As the general surgeon becomes an expert in laser endoscopy, less open or invasive procedures will be required to incise or excise internal pathology. The laser will then become a valuable tool and its true potential will be realized. ■

Editor's Note...

The preceding article on laser cholecystectomy was abridged from the publication "Lasers - The Perioperative Challenge" by Kay Ball, R.N., B.S.N., M.S.A., formerly Administrative Director, Grant Laser Center, Columbus, Ohio. Published by The C.V. Mosby-Yearbook Company, Toronto, 1990.

Laparoscopic Laser Cholecystectomy

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By Christopher J. Daly, M.D.

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- Books and training manuals on medical laser use
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- Patient information pamphlets on medical lasers.

What it takes to be a leader

A basic function of a good leader is to inspire people to their best efforts. Leaders know what should be done and how to get people to do it.

A person may be a good manager but not necessarily a leader. The manager will accept responsibility when it's given - the leader will not only accept responsibility but will take it when required.

Dwight D. Eisenhower described leadership as:

"the ability to get a person to do what you want him to do, when you want it done, in a way you want it done, because he wants to do it."

What, in fact, is leadership? Leadership, according to one point of view is: a) a function of "The Group"; b) an interaction between people - not based on any individual characteristic, but upon the relationships between certain members and the others in a group.

A group exists only so long as it has a goal(s) and is being relatively successful in moving towards its goal(s).

"Leaders" are those members who are "perceived" by the other members of the group as being effective:

- a) in setting up the group's goals
- b) in maintaining the group and moving it towards its goals.

Since groups exist to satisfy the needs of members it therefore becomes the role of the one(s) perceived as leader(s) to be effective in assisting the group and its members to achieve these satisfactions. One thing has to be made clear - the expectations of the group as to the goal(s) and of the leaders.

Types of Leaders.

All groups have both; a) a task leader and b) a social or maintenance leader, (not social in the way of a 'party'). Both types of leadership may be perceived to come from the one leader, though this may not always be the case, in which case two leaders will emerge. It is certain, however, that a group will find a leader for

both kinds of needs, or break down as an effective group.

Leadership is dependent on effective communication between the leader(s) and the group.

Key Points to Good Leadership:

1. Respect the personal integrity of individuals
 2. Recognize efforts and accomplishments of others
 3. Know yourself
 4. Encourage group participation and awaken enthusiasm
 5. Have a sense of humor
 6. Have the ability to 'get things done' (a leader doesn't shy away from responsibility or hard work; and doesn't quit when faced with unexpected obstacles)
 7. A leader makes decisions, sometimes they turn out right and sometimes they turn out wrong, but either way the decision was made.
 8. Ability to cooperate, be flexible, listen to others
- The person with leadership responsibility might ask:- What am I assuming about capabilities and motives of people?
- What impact do I have upon others - how do they react to my leadership?
 - To what extent do I have confidence in, and feel comfortable with myself?
 - How willing am I to be open with, and listen to, other people?
 - To what extent do I check my impressions against facts before reaching conclusions?

Phrases that leaders should use:

"I admit I made a mistake"; "You did a good job"; "What is your opinion?"; "Thank you" and the one most important word, "We".

I wish you all a very Merry Christmas, a prosperous, healthy life, and career fulfillment for the coming new year - 1991. Gloria Stephens, ORNAC President.