Treatment Of Hernia At Shouldice Follows Regular Routine

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Each year, approximately 1,400 men and women from all over Canada and the U.S.A. congregate in one of Toronto's largest hotels to enjoy a banquet and floor show. The only unusual aspect about this get-together is that the meal is preceded by a physical examination for each guest. Moreover, the 1,400 persons have at least one thing in common: they are all ex-patients of the world-famous Shouldice Surgery.

A Modest Beginning

This particular hospital had a modest beginning. In 1945, the late Dr. Earle Shouldice, a graduate of the University of Toronto, opened his own hospital on Church Street, Toronto. It contained six beds and one operating room.

Shouldice Surgery specializes in elective hernia repair. Ninety-eight percent of its operations are herniorrhaphies and two percent involve associated conditions, such as hydrocele and cysts of the epididymis. The technique at Shouldice emphasizes local infiltration anesthesia, early ambulation, and modified exercises postoperatively.

Many Provinces

Since most of the surgery at Shouldice is elective, many patients come from provinces other than Ontario; in addition, approximately 15 percent of all patients are from the United States.

Among the "patient alumni" is a Russian professor who, while on a tour of Canadian hospitals, visited Shouldice Surgery one morning to observe the operative techniques. He was so impressed that he asked the chief surgeon to operate again after lunch — this time on himself — for repair of a twice recurrent inguinal hernia. The professor is still highly pleased with the results!

Types of Hernia

Men, women and children may be afflicted with any of the following types of hernia that require repair:

Indirect Inguinal: This type is associated with the spermatic cord, extending from the internal ring, and may be continuous with the tunica vaginalis of the testicle. It usually consists of a peritoneal sac, but may consist almost entirely of lipomatous fat.

Direct Inguinal: This type presents through part, or all of the canal floor. It consists of a peritoneal sac or extra-peritoneal fat covered by the thinned out and stretched transversalis fascia.

Sliding: This refers to the type of hernia in which some portion of retroperitoneal viscus slides downward to form part or all of the hernia mass. The viscera usually involved are the ascending and decending colon and bladder. The peritoneal sac, if present, is usually found on the medial side of the hernia mass. Early recognition and special care in dissection are necessary to prevent damage to the blood supply to these organs.

Femoral: This presents below Poupart's ligament through the femoral sheath, and lies in close proximity to the femoral vessels. This hernia is often and easily overlooked.

Umbilical: This protrudes through a defect beneath the umbilicus and may consist of fat or a peritoneal sac.

Epigastric: This type protrudes through a defect in the midline between the umbilicus and the sternum. Diastasis of the recti may give the appearance of a hernia without an actual defect.

Incisional: This may follow any abdominal operation if a defect develops in the muscle layers of the incision.

Recurrent: A hernia is described as recurrent if there has been a previous surgical repair at the same site. Recurrence may result from inadequate dissection and repair, failure to remove a peritoneal sac, or from postoperative wound infection with breakdown of tissues.

Operative Procedure

Nembutal and Demerol are used preoperatively for sedation. Two percent Novocain without adrenalin is employed for local infiltration. The latter, provides a safe anesthetic for the elderly, as well as for young and middle-aged persons, and is particularly valuable for patients with severe heart and chest conditions. Since it is difficult to obtain complete relaxation with a local anesthetic in young children, a general anesthetic, usually Fluothane, is administered to children up to 14 years of age.

In children up to seven years of age, chromic catgut 00 or 000 is used for all ligatures and repair sutures; in children aged seven to twelve, monofilament surgical steel wire, 34 gauge, is used for repair, and catgut for all ligatures.

For adults and children over the age of 12, monofilament surgical steel wire 34 gauge is used throughout for ligatures and repair sutures in the abdominal wall; chromic catgut 00 is used for suturing the peritoneal sac and for any ligatures in the peritoneal cavity.

For incisional hernias, monofilament surgical steel wire 30 or 32 gauge is used for the repair satures, except that muscle is sometimes approximinated with 34 gauge wire. Umbilical and epigastric hernias are usually repaired with 32 gauge wire. Scarred tissues and tissues under tension require the heavier gauge wire.

Michel skin clips are used in all patients for approximation of the skin edges; these are removed in most cases on the second postoperative day.

Patient Care

Prior to admission, each patient receives a complete physical examination. Full particulars are recorded about age, sex, height, weight, waist measurement, type of work, religion, past medical history, present medication and treatment, if any. Hospitalization benefits, insurance, and the cost of surgery are discussed.

If the patient's condition is satisfactory, a definite operative date is arranged; if, however, an outstanding health problem requires attention, the examining doctor will at the patient's request, make an appointment with a corresponding specialist or refer the patient to his own doctor for treatment.

When the patient is considered overweight, he is given a date for operation, along with instructions on how to lose weight. Usually he is asked to lose only 5 to 20 pounds, but occasionally it may be 50 or even 100 pounds, depending on his build and the type of hernia. One of several diet sheets is given to the patient when weight loss is required, and extra daily vitamins are prescribed. Weight loss is recorded weekly, either by letter or attendance at the weight clinic. It has been found that far better surgery is accomplished when the tissues are lax and the patient is in as good general health as possible.

Patients are generally very co-operative about losing weight. One lady who had been refused surgery elsewhere because her health made her a poor surgical risk, lost approximately 100 pounds in one year under careful supervision, thereby making operation feasible.

Since so many patients from out-of-town asked how arrangements could be made for friends or relatives to come for hernia surgery, a questionnaire that could be sent on request was complied. The questionnaire is completed and returned by the prospective patient, preferably with the help of his family doctor, and an appointment is made by telephone or return mail. Information about the proposed surgery and instructions regarding any outstanding health problems, such as heart or chest conditions are included with the questionnaire.

Admission

The patient is admitted between 1 and 6 pm on the day prior to operation. Blood pressure, temperature, urine, heart and chest, are checked carefully. He is then shown to his private or semi-private room and instructed about such things as valuables, insurance forms, visiting hours (2 to 4 pm, 7 to 9 pm) and the length of stay in hospital (four days are required for a single hernia; six for a double hernia, and eight in triple cases, eg, bilateral inguinal and an umbilical or epigastric hernia).

The patient is asked to change into lounging wear and dressing gown and then is given the opportunity to rest or to retire to the common room. In the common room he will meet other "new" patients, as well as patients recovering from surgery, and will find for his amusement television, playing cards, jigsaws, books, and daily papers. The presence of this room encourages early ambulation because without it the patient would be inclined to stay in bed.

Operative Day

Patients are asked to shave the operative area prior to admission. On the morning of operation the area is thoroughly washed with pHisoHex. A mouth wash (Zinchloris) is provided and instructions are given for care of the teeth. Patients are allowed to keep any rings they might be wearing on their fingers. Operative gown and trousers are provided and the patient is asked to wear his socks.

Nembutal, the preoperative sedative previously ordered by the admitting doctor, is given orally one and one-half hours prior to operation, and Demerol is administered intramuscularly 20 minutes before surgery. The patient is then walked to the operating room, with the help of two doctors, and asked to lie down on the operating room table. A blood pressure cuff is placed on his arm and blood pressure pulse and respiration are recorded. The operative area is then rechecked and painted three times with zephiran prior to the infiltration of Novacain two percent. More anesthetic is injected into specific tissue planes during the operation; also, extra Demerol may be administered, and occasionally Sparine is used intramuscularly or intravenously.

On completion of the operation the patient is carefully walked back to bed and, following a few hours rest, is given a bed bath and his own lounging attire to put on. After this he is encouraged to walk to the washroom. On his return to bed he is asked to do deep breathing and leg exercises. Fluids are given as tolerated; oral analgesics are administered four-hourly for postoperative discomfort.

A light meal usually is well tolerated in the evening. A special diet may be ordered. After an incisional hernia repair, the routine diet consists of nourishing fluids for 24 hours, followed by a normal diet until discharge. This diet may be used following appendectomy or on request by the operating surgeon.

First Postoperative Day

The patient is encouraged to move about and arise early. Coffee is served between 6 and 7 am for the very early risers. All meals, including breakfast, are served in the dining room; this is considered preferable to tray service in bed, which would discourage mobility. All patients are transferred to ground floor bedrooms on the first postoperative morning unless they are scheduled for further surgery.

After breakfast the patients are asked to retire to their rooms to allow the physician to remove alternate Michel skin clips and to replace the dressing. Following this they can go to the bathroom for a complete wash, or be given a bed bath by the nurse. All patients are asked to congregate in the sitting room at 10 am for daily exercises, accompanied by selected music, under the supervision of a nursing assistant. Prior to this the registered nurse has given the nursing assistant a list of patients whose exercises have been limited because of general health reasons.

Mineral oil, one-half ounce, and fruit juice are given three times daily in hospital.

Second Postoperative Day

The same routine is followed as for the first postoperative day except that half an ounce of milk of magnesia is given before breakfast. All remaining Michel skin clips are removed, along with the dressing. Glycerine suppositories are given for relief of gas pains and abdominal distension if necessary; a Dulcolax suppository is sometimes ordered if the patient is unduly worried about not having a bowel movement.

Third Postoperative Day

The patient is examined in the morning. Temperature heart, lungs and operative area are all checked before he is discharged home. He is instructed to return within 10 days, or before if worried, so that the physician can examine the operative area. Advice is given about resuming work: sedentary workers may return to work immediately if they wish, but persons engaged in heavy physical labor may require three to four weeks off before resuming work.

Sometimes after bilateral inguinal hernia repairs, there is swelling, combined with ecchymosis, of the scrotum. The patient may need extra reassurance that this is natural and will recede within a few days.

Complications Rare

With this highly advanced technique and psychological approach, many procedures have been simplified. It rarely is necessary to administer intravenous fluid of any type; when it is necessary, it is usually for some other medical reason, such as perforated peptic or duodenal ulcer, abdominal obstruction, etc. Only one blood transfusion has had to be administered in many operations.

Because of the type of anesthesia, early ambulation, and the giving of copious amounts of fluid after return from the operating room, catheterization is rarely necessary. Enemata are nearly obsolete, being needed only once or twice a year; mostly they are given because the patient normally uses them. Early ambulation, exercise, daily mineral oil, and normal diet are the reasons why enemas are seldom required.

Occasionally, antibiotics are used prophylactically where there has been previous wound infection, or for difficult incisional and recurrent hernias; also, they may be administered to the patient who has a history of being prone to infection. Antibiotic Polybactrin powder, sprayed directly into the wound, is preferred for use during difficult and lengthy surgery. Postoperative complications are very rare, but occasionally chest conditions or wound infections may require the use of antibiotics.

Not one case of pulmonary embolism has occurred at Shouldice Surgery, probably because of early ambulation. Despite the large numbers of operations on persons who were considered to be poor surgical risks because of general health, there have been only 11 deaths out of 50,000 operations in 21 years.

During the years the postoperative wound infection rate has fallen from two percent to one percent. The recurrence rate of hernia is very low; it is approximately 1 in 200 for all operations, and about 1 in 500 for inguinal repairs. A 15-year followup plan is in force which helps greatly with research in hernia knowledge and surgery. The oldest patient to be operated on was 100 years old and was still living at the age of 103; the youngest was four weeks.

Shouldice Hospital Now Father's Dream Fulfilled

Dr. Byrnes Shouldice, son of the Shouldice Hospital's founder, says the recently completed construction of the new hospital has fulfilled a dream his father had.

"The hospital is a co-operative effort, with the team spirit the key to the friendly atmosphere and esprit de corps. We eliminate the anxiety factor for the patients" says the first vice-president and surgeon.

"In the new hospital we have tried to preserve the old atmosphere of Church Street. It's casual relaxed, pleasant," he says. "Our first objective, really, is to get people to relax."

"The patient operated on in the morning walks away from the operating area and is up and around in a short time. He encourages the new patient coming in during the afternoon. It's a question of alleviating fear," he says.

The aim of the operating technique is to cause as little damage to tissue as possible. Then patients are kept busy, happy and satisfied.

Dr. Shouldice believes the wounds of happy and busy patients heal faster. The request of a United States researcher, to attempt to evaluate the effects of patient attitude on the healing process met with co operation from Shouldice Hospital. Although the results of the project haven't yet been finalized, Dr. Shouldice believes this is a valid concept.

"The hospital is an environment. It can be good or bad for the patient. This depends even more on the actual people and nurses, than on the hospital facilities. Its atmosphere can be established by them. It depends on how the nurses make the patients welcome, and how the patients get the encouragement they need," says Dr. Shouldice.

"The new hospital has created the environment in which the staff has been able to develop this esprit de corps among the patients. We have 32 acres far away from city air pollution. The putting green, outdoor shuffleboard and paved walks give the patients something to do," he says.

DR. BYRNES SHOULDICE

Dr. Earle Byrnes Shouldice was born at 461 Dovercourt Road, Toronto, in 1929. He attended Forest Hill School and Upper Canada College. His wife is the former Catherine Louise Glynn of Toronto. Their family includes a girl Shelley and three boys, Glynn, James and Cameron.

Dr. Shouldice studied institutional management (hospitals and hotels) at Toronto University, graduating in 1951. The same year he took an army commission in the Irish Regiment of Canada. Then he spent some two years involved in the administration of the Shouldice Hospital.

In 1954 Dr. Shouldice started new studies at the University of Western Ontario, graduating with his Bachelor of Arts Degree in 1957. He then entered medicine at the university, graduating in 1961.

He returned to work at the Shouldice Hospital in 1962 to take over his present medical responsibilities.

His interests are skiing, curling, golf and sailing.

Founder's Only Daughter Serves As Shouldice Secretary Director

Mrs. William Urquhart, only daughter of the Shouldice Hospital's founder, serves as a director and secretary of the Shouldice organization.

She has taken an active part in the hospital's affairs for the past 20 years. Ten years ago, at her father's request, she started putting out the staff publication "The Bulletin", which contains hospital news and staff suggestions.

MRS. WILLIAM URQUHART

"It keeps the staff in touch and gives us all an opportunity to express ourselves," she says.

Mrs. Urquhart took her Bachelor of Arts Degree at the University of Toronto. Later she returned to the university to take her Masters Degree in Psychology, and did research at the Institute of Child Study. Her children have all attended the institute.

All of Mrs. Urquhart's children were born in the old Church Street division of the Shouldice Hospital, where she experienced first hand her father's practice of early ambulation. Her first child was born at 9 am and Dr. Shouldice drove his daughter and new grandchild home at 8 pm the same day.

She has five children and a foster son. Her husband is a prominent corporation lawyer, and serves as a director and vice-president of the hospital.

Mrs. Urquhart says that when her father died, both she and her brother felt it was important to keep the hospital going. It was then she began taking a very active interest, and they started planning the new hospital.

Her interest in education caused Mrs. Urquhart to direct the board of the hospital to establish an educational bursary for children of employees as a fitting memorial to her mother and father.

She is also a great believer in the independent school system, and serves on committees of the board of St. Clements School and Lakefield College School.

Her major involvement in the new building has been in selecting the furnishings and decor.

The home-like atmosphere was preserved through the careful and painstaking selection of beds, desks, bed tables, draperies, and rugs, etc.

Canadian prints are planned for the walls of all the hospital rooms, she says.

Forty-five rooms and other hospital areas had to be furnished and decorated. There were drapes to choose for all the patient's rooms. It took months to select uniforms that would be pleasing to the staff and patients alike.

Every item of furniture was personally selected. Fifty different models of a single type of chair were actually tested by the patients before one was ordered. The same kind of care was lavished on the other items.

"My job has been to provide the woman's touch and the layman's touch. Doctor's sometimes forget the ordinary things," says Mrs. Urquhart.

"This kind of think takes an awful lot of time, especially when you have to learn as you go along. Even then, it may not be too immediately noticeable," she said.