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THE INTERNATIONAL PELVIC PAIN SOCIETY
Professionals engaged in pain management for men and women.

IPPS

THE INTERNATIONAL PELVIC PAIN SOCIETY

Complete Pelvic Peritonectomy – Is There Evidence?

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Introduction

Complete pelvic peritonectomy is a surgical procedure that involves the removal of the peritoneal lining of the anterior and posterior cul-de-sac. It is used for the treatment of pelvic pain caused by severe endometriosis of the rectovaginal area, pelvic sidewalls, and peritoneum of the bladder. Some physicians also use this procedure to remove small and disseminated endometriosis in lieu of resecting all the implants separately.

Description of the Procedure

Complete pelvic peritonectomy can be achieved either laparoscopically or by laparotomy. This procedure was originally described in cancer surgery when the peritoneum was involved with implants or metastasis.[1,2] One of the most common malignant conditions in which peritonectomy is performed is advanced ovarian cancer. For patients with chronic pelvic pain and endometriosis this procedure is best completed by laparoscopy to minimize intraoperative tissue injury and postoperative pain.

In my practice, I recommend complete pelvic peritonectomy to patients with extensive endometriosis who failed previous, more conservative treatments. Patients who have other coexisting pain generators, such as pelvic floor tension myalgia of interstitial cystitis, are counseled on the need to treat those coexisting conditions after surgery. They are also informed of all the risks of surgery, which include injury to the rectum and ureters. Patients who suffer from midline pain and who wish to retain the uterus are offered presacral neurectomy at the time of pelvic peritonectomy. As with any patient operated on for chronic pelvic pain, patients scheduled for pelvic peritonectomy should undergo a bowel prep preoperatively. My preferred modality for anesthetizing patients for this surgery is combined general and epidural anesthesia. This allows for adequate intraoperative pain control, significantly improving postoperative pain management and facilitating early ambulation. It may also decrease upregulation in C-fibers leading to a faster resolution of pain.

Open laparoscopy is my preferred method of intra-abdominal entry. A 10-mm port is placed in the umbilicus and three 5-mm ports are placed half distance between the umbilicus and symphisis pubis; one in the center and two on both sides lateral to the inferior epigastric arteries. A survey of the upper abdomen is done before the patient is placed in steep Trendelenburg position. The anterior peritonectomy is performed first. Margins of the excision are usually formed by the edge of the bladder superiorly, medial umbilical ligaments laterally, and cervix inferiorly. Rarely, peritoneum lateral to the medial umbilical ligaments needs to be removed. The superior incision

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should be performed first to facilitate downward peeling of the peritoneum. Care needs to be taken not to injure the bladder. Depending on the depth and amount of endometriosis, peeling may be very easy in cases of superficial endometriosis or very difficult in patients with deep invading disease. When the peritoneum is mobilized all the way to the cervix, it needs to be sharply dissected, since this area is often densely adherent to the underlying tissues.

At this point of surgery, I recommend that the bladder be checked for any evidence of perforation. Even with close visual inspection of the pelvis, small bladder holes can be missed. One of the quickest ways to make sure that the bladder is intact is to check the foley catheter bag. If the bladder is perforated, the foley bag will inflate due to the positive pressure in the abdomen. This, however, may not be sufficient evidence for very small perforations. If suspicion of the perforation is high and there is no gas distention of the foley bag, the bladder needs to be filled with sterile water or sterile milk. I would not recommend filling the bladder with indigo carmine or methylene blue because, if there is indeed a perforation, the blue dye will stain tissues and make surgery more difficult. Also, if the patient was to have a cystoscopy at the end of surgery to look for interstitial cystitis, it would make this part of procedure impossible. If there is a perforation in the bladder, it can be easily repaired laparoscopically with 3-0 Vicryl. The foley catheter, in this case, should be left in place for 3 to 4 days.

After the anterior peritonectomy is completed, I recommend placing Interceed adhesion prevention barrier in the area from which the pertitoneum was removed. When the Interceed is in place, I suggest performing uterine suspension to facilitate access to posterior cul-de-sac and possibly decrease pelvic pain by taking away direct pressure of the sacrum. The posterior cul-de-sac should then be carefully examined and the location and amount of endometriosis should be assessed. In patients with severe endometriosis, I strongly recommend placing ureteral stents prior to this part of the procedure. This will greatly facilitate ureteral dissection and minimize the risk of injury. I usually start the peritonectomy on the patient's right side (for right-handed surgeons). I grasp the right infundibulopelvic ligament and make an incision in the peritoneum lateral to the ovarian vessels and fallopian tube extending from the bifurcation of the iliac vessels to the round ligament.

After this incision is made, visceral connective tissue needs to be separated to identify the ureter and the internal iliac artery with its branches. At this point the ureter needs to be mobilized laterally from the medial leaf of the peritoneum on the entire length from the pelvic brim to the cardinal ligament. After the ureter is free of its peritoneal attachments, an incision is made in the medial leaf of the broad ligament underneath the infundibulopelvic ligament and fallopian tube all the way to the uterus. The peritoneum is then slowly peeled all the way down over the uterosactral and cardinal ligaments to the rectum. Removing the peritoneum from the ligaments is often quite difficult, since it is more adherent to them.

When the lateral edge of the rectum is reached, extreme care needs to be taken as it is very easy to injure the rectum in this area. Before the peritoneum is peeled from the rectum, a rectovaginal space needs to be developed. I usually place a lucide rod in the rectum to facilitate this part of the procedure and decrease the risk of bowel injury. When the entire peritoneum is removed from the rectum, the same procedure needs to repeated on the other side of the pelvis. Rarely, posterior peritoneum can be removed in one piece and often there is a right posterior and a left posterior peritoneum. When this part of the procedure is completed it is imperative to check for possible injury to the rectum. This is easiest checked by filling the pelvis with sterile water or saline and inflating the rectum with air. If there is an injury to the rectum, air bubbles will be seen in the pool of fluid. After this step, I recommend placing Interceed in the posterior cul-de-sac to prevent adhesion formation between the uterus and the rectum.

Scientific Evidence

There is no known scientific evidence for efficacy of complete pelvic peritonectomy. Review of all the publications listed in Medline database revealed only one research paper discussing effectiveness of complete pelvic peritonectomy.[3] In this study, 17 out of 20 patients with stage 2 to 4 endometriosis were pain-free at nine to 36 months follow up. The Cochrane review of laparoscopic treatment of pain associated with endometriosis did not address the differences between excision of endometriosis lesions versus excision of entire pelvic peritoneum.[4] Furthermore, recent review of medical and surgical treatments for chronic pelvic pain did not find significant advantage of surgery versus medical treatment.[5] In my own experience, complete pelvic peritonectomy is successful in significantly decreasing pelvic pain in approximately half of the patients. It may work not only through the removal of diseased tissues, but also by removing some pelvic innervation.

Pros and Cons of Peritonectomy

The peritoneum is the largest serous membrane of the body.[6] It outlines all of the intraperitoneal organs (visceral peritoneum) and abdominal wall (parietal peritoneum). Endometriosis is a disease of the peritoneal lining, and in cases where it penetrates more than 5 mm below the peritoneum, it is called deep endometriosis.[7] In cases where deep endometriosis is present, it is logical to assume that surgical excision of this endometriosis should be better than laser or thermal ablation.[8] There is also an ongoing debate whether endometriosis is always visible on the peritoneal surface.[9,10] Taking into account all of this information, I believe that patients who have failed previous surgical and medical therapy for pelvic pain, and in whom other conditions causing pelvic pain have been ruled out, peritonectomy should be offered. This may allow more complete removal of endometriosis and increase the chance for resolution of pain. However, pelvic peritonectomy does have several disadvantages. One of the most common is high risk of adhesion formation between the tissues that do not have peritoneal lining. Those adhesions may contribute to an increase in pain. Also, since new peritoneum quickly replaces the one that was removed,[11] there is a potential for endometriosis to form on the new peritoneum. Peritonectomy is also a difficult procedure with possible risk of injury to ureters, pelvic vessels, bladder, and rectum. I believe that it should only be preformed by surgeons who have advanced knowledge of anatomy, and laparoscopic procedures.

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The President's Perspective

Alfredo Nieves, MD

It was a great pleasure seeing all of you at the 14th Annual Scientific Meeting in San Antonio, Texas. Thank you very much to Dr. Georgine Lamvu for her hard work, and great speaker and topic selections for this meeting, which I feel was a great success. As a member of the society for many years I look forward to this meeting, because of the camaraderie among the members, the welcoming new faces, and the opportunity to exchange new and old ideas with friends old and new. Attendees at this particular meeting were extremely saddened by the loss of one of our founding members, Dr. James E. Carter. There was a somber air and a feeling of nostalgia - we missed those editorial comments characteristic of Dr. Carter, missed his laughter and joyful self and missed his thoughtful remarks. It will be very hard to fill his shoes, but as incoming president of the International Pelvic Pain Society, I will do my best to continue to promote the care of those who are in pain, and continue to run with the torch as Dr. Carter did. I would also like to thank the board members for their support.

I am very excited to take over the presidency of the society. It will be an honor and a pleasure to serve you all during this next year. I have several ideas of how we can serve the general community and to continue to educate physicians locally and abroad, one of these being the establishment of diagnostic criteria for pelvic congestive syndrome. As you know, this elusive diagnosis has been a problem in a lot of our patients, and we need reproducible criteria for which we will try to work on specific diagnostic criteria.

I would also like to encourage our members to try to recruit new members so we can continue to plant the seed of advocacy for our growing population of pelvic pain sufferers.

Tribute to Dr. Carter

On Oct 6th, 2006, the world lost one of its most extraordinary physicians - James Edward Carter, MD. This day will forever be etched in my memory as one of the saddest days of my life, as on that day I lost my uncle, my mentor, my colleague and friend.

As many of you know, Jim was one of the original founders of The International Pelvic Pain Society. He served as past president of the IPPS and most recently as a board member. In addition to this, Jim was also the past president and founding member of The Society of Laparoendoscopic Surgeons, a Fellow of the American College of Obstetrics and Gynecology, a Clinical Associate Professor at the University of California, Irvine, in the Department of OB-GYN and the Medical Director of The Women's Health Center of South Orange County. Among his impressive academic achievements, Jim authored over 30 research articles, co-authored the book, "Pelvic Pain: Diagnosis and Management," served as editor for many professional journals, received 5 U.S. patents for surgical devices and lectured internationally about pelvic pain treatment and laparoscopic surgery. All of this professional training and acclaim supported Jim's main tenet in his practice: the best patient care possible delivered with love and understanding.

As you can see from all his publications and patents, Jim was a brilliant physician and surgeon, and an accomplished expert in women's health and pelvic pain. But there is more to the picture than such extensive credentials. Jim was loved by his patients because of his compassion, patience, humility and the personal relationship he shared with each and every one of them. I know this first hand, as I had the opportunity to treat many of them over the years. It was routine for me to hear about how uniquely he delivered the utmost exceptional care, giving each one of his patients his undivided attention, no matter how busy he was. Jim was always available regardless of what time it was. When he couldn't find a solution, he found someone who could.

On a personal level, Jim was my mentor, guiding me through my professional career. Due to his influence, I chose to specialize in pelvic floor physical therapy, focusing on the treatment of women suffering with pelvic pain. I spent time shadowing him at his office and got to see him in action treating his patients. Jim always knew how to push me just hard enough, and saw talents and strengths in me that I didn't know I possessed until I tried using them. He challenged me to go outside of my comfort zone again and again. He was an amazing teacher and I will forever value all he taught me.

So thank you, Uncle Jimmy, for all you have done to help me, and the thousands of lives you have touched over the last 20 years in your practice. I will miss collaborating with you and sharing with you the passion to help women who suffer with pain. My hope is to be at least half the clinician you were and to carry on your healing legacy.

I love you,

Julie Sarton, DPT
Orange, California

The Carter family also thanks Dr. Paul Perry for his unwavering support, constant prayer and presence at Jim's memorial service. We deeply appreciate all you have done – you and many others have helped make this difficult time easier for all of us.

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Thank you.

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If you wish to contribute an article or column to the newsletter, would like to submit information regarding job prospects, or have comments about the newsletter, please e-mail Rhianna Wisniewski at rhianna@wjweiser.com.

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Please join us in educating ourselves on how best to treat chronic pelvic pain. With your help, we can provide relief and a more normal lifestyle for our patients. For membership information, please call (847) 517-8712 or visit our website at www.pelvicpain.org.

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