Case Report

Surgical Management of Superficial Peritoneal Adolescent Endometriosis

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A B S T R A C T

Background: Adolescent endometriosis typically presents as stage I with superficial peritoneal disease and less commonly as stage III or IV with deeply infiltrative disease. Endometriosis lesions can be destroyed (cautery or laser), cutting out the discrete lesion with excision and destroyed, or radically excised with removal of the lesion and surrounding tissue. It has been shown to be beneficial to excise deeply infiltrative disease to improve pain. Radical excision has been promoted by a subset of surgeons and involves removal of large areas of peritoneum with the promise/proposal of a cure and suggestion of no need for medical suppression of endometriosis. The best technique to manage superficial peritoneal disease has not yet been defined.

Case: A 15-year-old young woman with a history of 2 previous laparoscopies for pain and an ovarian cyst who underwent removal of a mucinous cystadenoma, presented to a local gynecologist with chronic pelvic pain. She underwent a third laparoscopy and was found to have superficial peritoneal endometriosis and filmy adhesions believed to be due to the previous ovarian surgery. The endometriosis was surgically destroyed with the use of cautery and the filmy adhesions were lysed. Months later she had a return of pain and was advised to have a fourth laparoscopy with radical excision by an "excisionalist" gynecologist. She was found to have superficial peritoneal disease with ASRM-defined stage I endometriosis and underwent radical excision of the peritoneum of the anterior cul de sac, posterior cul de sac, and both pelvic side walls. She was informed that she had been cured of her endometriosis and was thus not treated with postoperative hormonal suppression. Her pain did not improve and in fact worsened after the radical excisional surgery. She self-referred for care. She started menstrual suppression treatment with continuous estrogen/progestin therapy for medical treatment of endometriosis but after 6 months she was still having severe pain without bleeding. Eight months after the radical excisional surgery she elected to have a fifth laparoscopy to address potential adhesions. At that time she was found to have extensive pelvic adhesions with the uterus adherent to the anterior cul de sac, and adhesions in the posterior cul de sac. In addition, both ovaries were involved with adhesions and adherent to the pelvic side walls. She was found to have clear and red lesions of superficial peritoneal endometriosis. She underwent a lysis of adhesions, and excision of lesions, and destruction of endometriosis. Her pain improved postoperatively; menstrual suppression was continued and she has remained with a continued excellent quality of life with over 2 years of follow-up.

Summary and Conclusion: For this patient, radical excisional surgery resulted in increased pain and extensive adhesion formation. It was not curative because endometriosis was documented on follow-up surgery. In a previously published long-term follow-up report of adolescents with recurrent pain 2-10 years after destruction of superficial peritoneal disease, it was reported that there were no increased adhesions and no trend toward disease progression. Excisional gynecologists who perform this procedure should not suggest that radical excisional surgery is helpful and without increased risk, until studies have shown long-term benefit in the surgical management of superficial peritoneal endometriosis.

Key Words: Adolescent endometriosis, Surgical management, Surgical destruction, Radical

Introduction

Endometriosis is a complex disease that can be associated with pelvic pain, endometriomas, and possible infertility. There is no single etiology to explain the varied occurrences and there might be a constellation of disease entities. Endometriosis does occur in adolescents and can be associated with debilitating pain.[1,2] Of adolescents with persistent pain who are taking cyclic combination hormonal pills, currently the primary treatment for dysmenorrhea, 69% have been shown to have endometriosis.[1] It should however be noted that those studies were from the 1990s and now with improved visualization from high-definition imaging, surgical identification rates can be much higher.

Adolescent endometriosis typically presents as superficial peritoneal disease and less commonly as deeply infiltrative disease. It is important that surgeons who perform surgery on adolescents with concern for endometriosis be able to use techniques for identification of these subtle lesions.[3] Superficial peritoneal disease is believed to be highly inflammatory and studies have shown that clear and red

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lesions are the most painful.[4] These lesions are commonly found in adolescents.

When identified at the time of a laparoscopy, superficial peritoneal disease can be destroyed using an energy source (cautery or laser), cutting out the discrete lesion with excision and destroyed, or radically excised with removal of the lesion and surrounding normal-appearing tissue. To our knowledge, there is no study that shows superiority of technique for the treatment of superficial peritoneal disease. One long-term follow-up study of 90 adolescents, who had laparoscopic ablation of disease and return of pain 2-10 years after their initial laparoscopy, underwent a repeat laparoscopy and were found to have identifiable disease, no adhesions from the initial surgery, and their disease did not tend to progress.[5] Another adolescent follow-up study used radical excision and stated that patients were surgically cured of their disease and thus recommended no hormonal suppression. Fifty percent of subjects had a return of pain within 1 year; at repeat laparoscopy the surgeons did not appreciate visible disease and thus concluded that the pain was not from endometriosis.[6] An alternative explanation could be that the surgeons were not able to visualize the microscopic disease that was present and contributing to the recurrent pain.[7] It has been shown to be beneficial to excise deeply infiltrative disease to improve pain.[8] The best technique to manage superficial peritoneal disease has not yet been defined.

Case

A 15-year-old young woman with a history of 2 previous laparoscopies for pain and an ovarian cyst and who underwent removal of a mucinous cystadenoma, presented to a local gynecologist with chronic pelvic pain. She underwent a third surgical laparoscopy and was found to have superficial peritoneal endometriosis (Fig. 1) and filmy adhesions believed to be due to the previous ovarian surgery. The endometriosis was surgically destroyed with the use of cautery and the filmy adhesions were lysed. Months later she had a return of pain and was advised to have a fourth laparoscopy with radical excision by an “excisionalist” gynecologist. She was found to have superficial peritoneal disease with ASRM-defined stage I endometriosis and underwent radical excision of the peritoneum of the anterior cul de sac, posterior cul de sac, and both pelvic side walls (Fig. 2). She was informed that

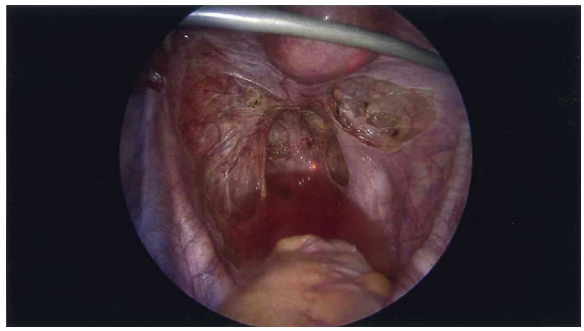

Fig. 2. Conclusion of radical excisional surgery. [Personal image of prior surgery supplied by patient with written consent to publish].

she had been cured of her endometriosis and was thus not treated with postoperative hormonal suppression. Her pain did not improve and in fact worsened after the radical excisional surgery. She self-referred for care. She started menstrual suppression with continuous estrogen/progestin therapy for medical treatment of endometriosis but after 6 months she was still having severe pain without bleeding. Eight months after the radical excisional surgery she elected to have a fifth laparoscopy to address potential adhesions. At that time, she was found to have extensive pelvic adhesions with the uterus adherent to the anterior cul de sac, and adhesions in the posterior cul de sac. In addition, both ovaries were involved with adhesions and adherent to the pelvic sidewalls. She was found to have clear and red lesions of superficial peritoneal endometriosis (Figs. 3 and 4). She underwent a lysis of adhesions using sharp dissection, sharp excision of lesions, and destruction of superficial lesions of endometriosis using electrocautery. The diagnosis of persistent or recurrent endometriosis was confirmed on pathologic examination of excised lesions. Her pain improved postoperatively. Menstrual suppression was continued with the plan for long-term use because there is no surgical cure for endometriosis She has remained with excellent quality of life with minimal or no pain for over 2 years.

At that time she was found to have extensive adhesions with the uterus adherent to the anterior cul de sac, both ovaries were encased in adhesions, and there were clear and red lesions of superficial peritoneal endometriosis visualized throughout the pelvis (Figs. 3 and 4). She underwent a lysis of adhesions and excision and destruction of

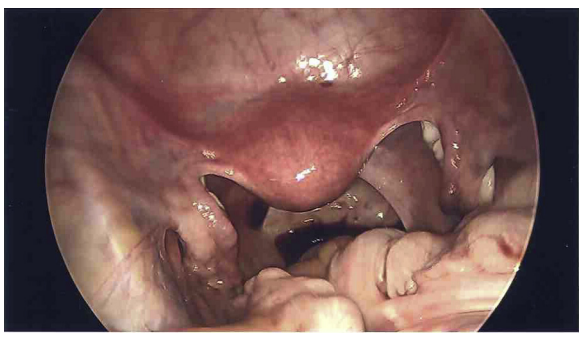

Fig. 1. Initial surgery with diagnosis of stage I endometriosis. [Personal image of prior surgery supplied by patient with written consent to publish].

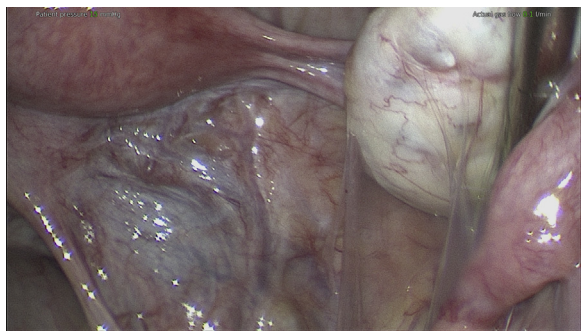

Fig. 3. Adhesions of right ovary noted 8 months after radical excisional surgery. [Image from surgery by MRL with written consent from patient to publish].

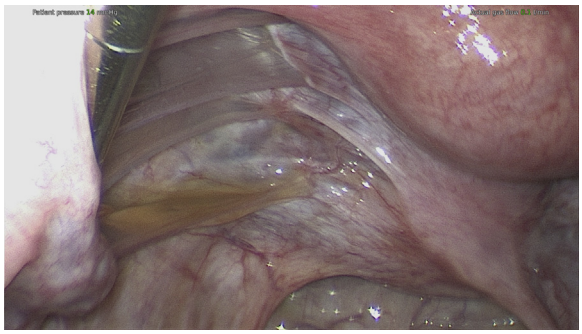

Fig. 4. Adhesions of left ovary noted 8 months after radical excisional surgery. [Image from surgery by MRL with written consent from patient to publish].

endometriosis. The diagnosis of persistent or recurrent endometriosis was confirmed on pathologic examination of excised lesions. Her pain improved postoperatively. Menstrual suppression was continued with the plan for long-term use because there is no surgical cure for endometriosis. She has remained with excellent quality of life with minimal or no pain for more than 2 years.

Summary and Conclusion

For this patient, radical excisional surgery resulted in increased pain and extensive adhesion formation. It was not a surgical cure, and there is no surgical cure for endometriosis. In a long-term follow-up report of adolescents with recurrent pain 2-10 years after destruction of superficial peritoneal disease and subsequent maintenance during menstrual suppressive therapy, it was reported that there were no increased adhesions and no trend toward disease progression.[5] Studies have shown that for superficial peritoneal disease there is no difference in follow-up pain when using either excision or destruction.[8] In cases in which the endometriosis is deeply infiltrative, these same studies have shown that it is better to excise or remove the tissue than just to destroy it.[8]

Gynecologic surgeons should not extrapolate from studies showing benefits of excisional surgery for stage III and IV disease to suggest that radical excision of superficial peritoneal disease is curative and without increased risk in adolescents, until studies have shown those findings. Although it is difficult to draw definitive conclusions from a single case, aggressive peritoneal excision in adolescents might be overtreatment because it can lead to the development of new symptoms and possible adverse effects on future fertility from adhesion formation. To improve quality of life and preserve future fertility, long-term medical menstrual suppression is needed for all adolescents with endometriosis because there is no surgical or medical cure for this disease.

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