Non-Endometrioid Peritoneal Lesions in Pelvic Pain and Infertility Patients: A Case Series

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Abstract

BACKGROUND: A wide variety of benign, nonspecific peritoneal lesions, low malignant potential tumor (LMPT), and malignant lesions can be identified at laparoscopy in addition to endometriosis. Laparoscopic criteria for the identification of such lesions are currently not well defined. Consequently, many of these lesions must be biopsied for definitive diagnosis. Biopsy and histologic examination of peritoneal lesions can be demanding, poses risks of bleeding and damage to organs, and in the case of benign lesions may not be clinically useful. However, lesions that are potentially malignant cannot be ignored while trying to limit non-productive biopsies. One purpose of this case series is to document non-endometriotic peritoneal lesions in patients undergoing laparoscopy for pelvic pain and infertility. A second purpose is to begin investigation into the prevalence of various pathologies within this population. The third purpose is to formulate the criteria that might be useful.

STUDY DESIGN: 32 laparoscopic cases were identified in the data base of a study of 101 patients for ureteral position with and without endometriosis. 69 patients with endometriosis and no histologic evidence of other peritoneal pathology were excluded from this analysis. All cases were operated upon by one surgeon between 2002 and 2004. Peritoneal biopsies of lesions suspicious for disease processes other than endometriosis had been obtained during the usual clinical practice at laparoscopy. The histologic slides of the entire series were read by 22 different non-blinded pathologists using their usual histologic criteria. These cases were reviewed to determine trends in non-endometriotic pathology in patients with pelvic pain and infertility.

RESULTS: Of the 32 patients in this series, 25 were referred after previous pelvic surgery. Twenty-two (69%) of the 32 patients had histologically confirmed adhesions and 11 (34%) had the following other lesions: 4 had vesicles, 6 had foreign bodies, 4 had hemosiderin, and 1 had foamy macrophages. Two (6%) patients had endosalpingiosis and 2 (6%) had psammoma bodies, but none had both. Six (19%) patients had nonspecific histology. Endometriosis was found concurrently in 3 cases (9%); in 2 patients with adhesions and in 1 patient with endosalpingiosis. In all three cases, endometriosis was histologically confirmed at a prior surgery as well. Among the 7 patients who had no previous surgery, 4 had adhesions, 3 had vesicles, and 2 had nonspecific histology, but none had endosalpingiosis, psammoma bodies, foreign bodies, hemosiderin, or foamy macrophages. There were 4 patients with no peritoneal lesions who had a teratoma, granulosa cell tumor, fibroid, and hydatid cyst respectively.

CONCLUSIONS: In the laparoscopic evaluation of pelvic pain and infertility, biopsy of suspicious peritoneal lesions yielded only benign, nonspecific pathology in this series. Other studies have demonstrated that similar appearing lesions have been endometrioisis, LMPT, or cancer. The prevalence of various lesions has not been well quantitated. This study suggests the need for adequate laparoscopic criteria for the identification of adhesions, endosalpingiosis, psammoma bodies, vesicles, foreign body, and other more common pathology. Formulation of such criteria may reduce the resources needed for histologic evaluation and might help to clarify the clinical significance of these lesions. Criteria also need to consider the possibility of cancer so that lesions that are potentially malignant are not ignored while trying to limit non-productive biopsies. In addition, prospective studies are needed to determine the management of lesions other than endometriosis, LMPT, and cancer. If some lesions do not need specific therapy or surveillance, then criteria to identify them may help to avoid unnecessary use of biopsy.

Introduction

A wide variety of benign, nonspecific peritoneal lesions, low malignant potential tumor (LMPT), and malignant lesions can be identified at laparoscopy in addition to endometriosis. Laparoscopic criteria for the identification of such lesions are currently not well defined. There are no established, highly predictive visual appearances of endometriosis or other peritoneal lesions other than puckered, dark lesions that are endometriosis. Grainy and non-scarred vesicles are often endosalpingiosis or psammoma bodies, but this observation has not been quantitated. In fact, several studies have documented that endosalpingiosis was often misdiagnosed as endometriosis. In addition, LMPT and cancer can have the visual characteristics of benign lesions. As a result, many lesions must be biopsied for definitive diagnosis. Biopsy and histologic examination can be time consuming, expensive, and may result in bleeding and damage to organs. Furthermore, some benign lesions do not appear to be of immediate clinical significance, and biopsy may not be useful in their management. However, while trying to limit non-productive biopsies, it is important that lesions that are potentially malignant are not ignored.

Methods

Thirty-two laparoscopic cases with evidence of non-endometrioid peritoneal pathology were identified in a data base of patients operated upon by one surgeon between 2002 and 2004 for pelvic pain or infertility (Martin 2006). Twenty-five patients were referred after previous pelvic surgery. Biopsies of lesions suspicious for disease processes other than endometriosis were obtained during the usual clinical practice at laparoscopy. Histology was analyzed by non-blinded pathologists.

Results

Of the 32 patients, 22 (69%) had histologically confirmed adhesions. Eleven (34%) had the following other lesions: 4 vesicles, 6 foreign bodies, 4 hemosiderin, and 1 foamy macrophages. Two (6%) had endosalpingiosis and 2 (6%) others had psammoma bodies. Six (19%) had nonspecific histology (Table I). Endometriosis was concurrently found in 3 cases (9%); in 2 patients with adhesions and in 1 patient with endosalpingiosis. Among the 7 patients who had no previous surgery, 4 had adhesions, 3 had vesicles, and 2 had nonspecific histology. There were 4 patients with no peritoneal lesions who had a teratoma, granulosa cell tumor, fibroid, and hydatid cyst respectively.

Peritoneal Lesions

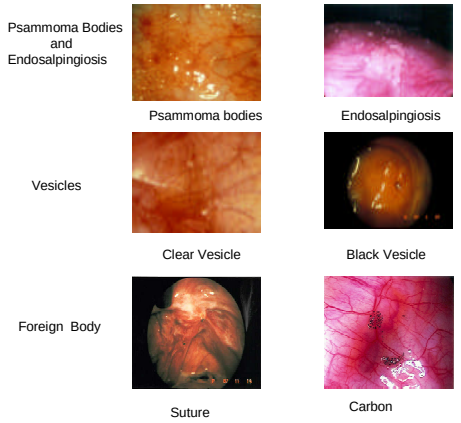
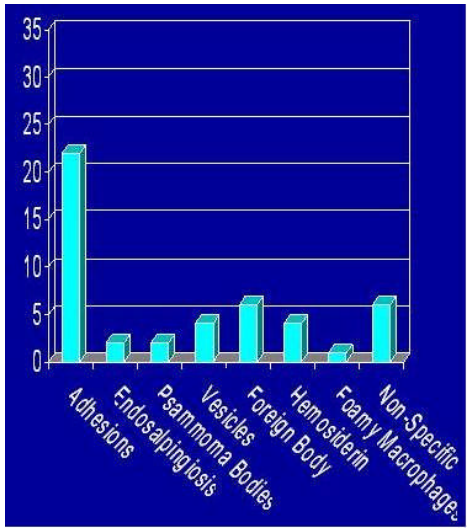


Table I



Conclusions

In the laparoscopic evaluation of pelvic pain and infertility, biopsy of peritoneal lesions yielded only benign, nonspecific pathology in this series. Other studies have demonstrated that similar appearing lesions have been endometriosis, LMPT, or cancer. Endosalpingiosis occurred at a similar frequency in this study to those seen by Hesseling (2000) and by Nascu (2006). The frequency of other lesions has not been well quantitated in the literature. Prospective studies in which pathologists are blinded are needed in order to quantify the prevalence of various lesions without expectation bias. This study also suggests the need for adequate laparoscopic criteria for the identification of adhesions, endosalpingiosis, psammoma bodies, vesicles, foreign body, and other more common pathology. Formulation of such criteria may reduce the resources needed for histologic evaluation and might help to clarify the clinical significance of these lesions. Criteria also need to consider the possibility of cancer so that lesions that are potentially malignant are not ignored while trying to limit non-productive biopsies. The treatments of endometriosis, LMPT, and cancer have extensive literature on which to base therapy. Prospective studies are needed to determine the management of other lesions. If some lesions do not need specific therapy or surveillance, then criteria to identify them may help to limit biopsy to only those cases that might have significant results.

References

1. Martin,DC, Webb,TL, Lazarus,EJ. Histologic confirmation of endometriosis may not be clinically useful. J Minim Invasive Gynecol. 2006;13 (5 Suppl): S97.

2. DeHoop TA, Mira J, Thomas MA. Endosalpingiosis and chronic pelvic pain. J Reprod Med. 1997;42:613-16.

3. Keltz MD, Kliman HJ, Arici Am, Olive DL. Endosalpingiosis found at laparoscopy for chronic pelvic pain. Fertil Steril. 1995;64:482-85.