

Original Investigation

Clinical characteristics and location of lesions in patients with deep infiltrating endometriosis: using the revised Enzian classification

Morgan-Ortiz et al. Deeply infiltrating endometriosis and Enzian score

Fred Morgan-Ortiz¹, Manuel Antonio López-de la Torre¹, Marco Antonio López-Zepeda², Fred Valentín Morgan-Ruiz¹, José Cándido Ortiz-Bojórquez³, Martín Adrián Bolívar-Rodríguez³

¹Department of Obstetrics and Gynecology, Civil Hospital of Culiacán, Center for Research and Training in Health Sciences, Autonomous University of Sinaloa, Culiacán, Sinaloa, Mexico

²Center of Excellence in Endometriosis, San Javier Hospital, Guadalajara, Mexico

³Department of General Surgery, Civil Hospital of Culiacán, Center for Research and Training in Health Sciences, Autonomous University of Sinaloa, Culiacán, Sinaloa, Mexico

Address for Correspondence: Fred Morgan-Ortiz

Phone: (667) 7132606 e-mail: fmorganortiz@hotmail.com

DOI: 10.4274/jtgga.2018.0120

Abstract

Objective: To describe clinical characteristics and location of lesions in patients with deeply infiltrating endometriosis using the revised Enzian (rEnzian) classification.

Methods: Clinical records of 60 patients undergoing laparoscopy for deeply infiltrating endometriosis at Hospital Civil de Culiacán, Sinaloa and Hospital San Javier, Jalisco, México were reviewed. Age, body mass index (BMI), number of pregnancies, childbearing, previous abortions, laparoscopic suggestion (pelvic pain, bleeding, infertility), size and location of the lesions, were assessed according to rEnzian classification.

Results: Mean age was 30.5 years with a Body Mass Index of 25.6 kg/m²SC. 68% of them were nulliparous and 13% had at least one birth. 85% got pelvic pain and 8.3% infertility. 70% (n = 42) of the cases had ovarian endometriomas (middle compartment); uterosacral and torus uterinus' ligaments were affected in 23.3%, rectum and sigmoid colon in 35% (posterior compartment) and appendix and small intestine in 3.3%. According to the rEnzian Classification the most affected compartment was C2 (rectum and sigmoid colon with 1-3cm lesions).

Conclusions: Pelvic pain was the main symptom of patients with deeply infiltrating endometriosis, mainly in nulliparous. According to the rEnzian classification the compartment C2 was the most affected (rectum and sigmoid colon).

Keywords: Endometriosis, Clinical characteristics, Surgical findings, Deeply Infiltrating Endometriosis, Enzian classification

Introduction

Endometriosis is one of the main causes of pain and infertility in women; it could be classified as peritoneal, ovarian and deep and affects mostly reproductive-age women (25-35 years) in a 10-15%. [1] It is unusual in pre or post menarcheal women and rare in postmenopausal ones. [2, 3]

Main symptoms, referred by patients diagnosed with endometriosis, are dysmenorrhea (79%), pelvic pain (69%), dyspareunia (45%), modified gut transit (constipation, diarrhea in 36%), intestinal pain (29%), infertility (26%), ovarian mass (20%), dysuria (10%) and other urinary disorders (6%). [4, 5]

Different classifications for endometriosis staging have been proposed based on anatomical location and disease severity. The American Society for Reproductive Medicine (ASRM) score is the most commonly used; it is easily applied and understood by physicians and patients and classifies disease severity in stages I to IV. Among its disadvantages are that staging is not fully correlated with morphologic affection of organs, poor prediction of pregnancy success after treatment, limited reproducibility, retroperitoneal affection neither deeply infiltrating endometriosis are included, moreover, pain and infertility are poorly correlated with length of the disease. [6, 7]

For this reason, in the year 2005 in Austria, a working group meeting was held with the purpose of elaborating a new classification which included retroperitoneal affection, mainly deeply infiltrating endometriosis (DIE); finally designing Enzian classification, [8] which currently is not well-known and has a poor level of international acceptance, mainly used in German-speaking countries. This first Enzian Classification was difficult to use and included anterior, medial and posterior compartments. [8] Then, in

2011 a review of this classification cleared up the findings combining morphological structures in compartments as the previous one but only considering posterior portion of the uterus as compartment A (rectovaginal septum and vagina), B (sacrouterine ligaments and pelvic wall) and C (sigmoid colon and rectum) and sets the severity of the lesions according to their size as: Grade 1 (invasion <1cm), Grade 2 (invasion 1-3cm) and Grade 3 (invasion >3cm). [9] Invasion to other organs of lesser pelvis and distance are also considered in this new classification as FA for adenomyosis, FB for bladder involvement, FU for intrinsic ureter involvement, FI for intestine involvement and FO other organs or structures involvement, as abdominal wall. This reviewed version of the classification (2011) was more feasible, useful and easy to understand by physicians. [9]

Several studies have evaluated Enzian Classification correlated with clinical symptoms and rASRM classification, reporting Enzian Classification partially related to clinical symptoms and severity grades but significantly correlated with pain and dysmenorrhea, thus, it could be recommended as a complement for rASRM classification in order to better describe morphologically DIE lesions, even though it requires to be improved. [10-12]

The aim of the present study was to describe the clinical and sociodemographic characteristics as well as distribution of the lesions according to the revised Enzian (rEnzian) Classification in patients diagnosed with deeply infiltrating endometriosis by laparoscopy.

Material And Methods

Previously approved by Ethic and Research Committee an observational, descriptive and retrospective study was carried out in patients diagnosed and treated for deeply infiltrating endometriosis (DIE) with histopathologic study. 60 clinical records of patients undergoing laparoscopic surgery from Hospital Civil de Culiacán, Culiacán, Sinaloa and Clínica de Excelencia en Endometriosis, Hospital San Javier, Guadalajara, Jalisco; México, were assessed from July 2010 to July 2016. All patients were diagnosed with DIE before surgical treatment by a multidisciplinary team which included gynecologist, coloproctologist, urologist, psychologist and imaging experts in ultrasound and magnetic resonance. Enzian Classification (2005) and revised Enzian Classification (2011), were used to assess the disease. [12] This latter version only evaluates DIE location mainly in the posterior portion of the uterus as: compartment A (rectovaginal septum and vagina), B (sacrouterine ligaments and pelvic wall) and C (sigmoid colon and rectum) and sets the severity of the lesions according to their size as: Grade 1 (invasion <1cm), Grade 2 (invasion 1-3cm) and Grade 3 (invasion >3cm). Invasion to other organs of lesser pelvis and distance are also considered in this new classification as FA for adenomyosis, FB for bladder involvement, FU for intrinsic ureter involvement and FI for intestine involvement and FO for other organs or structures involvement, as abdominal wall.

Analyzed variables were: age, body mass index (BMI), number of pregnancies, childbearing, previous abortions, laparoscopic suggestion (pelvic pain, bleeding or infertility) as well as medical sessions previous to the diagnostic of endometriosis. Surgical findings included number and location of the lesions: anterior compartment (bladder and vesical peritoneum), medium compartment (uterus and ovaries), posterior compartment (rectovaginal septum, uterosacral ligaments, and rectum sigmoid colon) and other locations (ureter, small gut, appendix, etc.) as well as their size. In addition, a description of surgical findings in DIE patients was reported according to revised Enzian Classification related to distribution and severity of the lesions in compartments A, B, C, FA, FB, FI y FO.

Statistical analyses included mean and standard deviations for numerical variables and frequencies and percentages for categorical variables. Besides, 95% confidence interval was calculated in for each estimate. SPSS statistical package version 22.0 was used.

Results

Mean age of the patients was 30.5 years old (CI 95%: 28.6-32.3) with a mean BMI of 25.7 Kg/m²SC (CI 95%: 24.8-26.5). Mean medical sessions, previous to the diagnostic of endometriosis were 7 (CI 95%: 5.9-8.0). Gyneco-obstetric characteristics reported 68% of them were never-pregnant women (CI 95%: 55.0-79.7), with at least one childbirth 13% (CI 95%: 5.9 - 24.5), at least one cesarean 18% (n = 11/60; CI 95%: 9.52 -30.43) and at least one abortion 13% (n = 8/60; CI 95%: 5.9-24.5). The first sign to proceed with a diagnostic/surgical laparoscopic procedure was pain in 85% (CI 95% 73.4-92.9), infertility in 8.3% (CI 95%: 2.7-18.3) and finally, abnormal genital bleeding in 6.7% (CI 95%: 1.8-16.1) (Table 1).

DIE lesions were very commonly found in medial compartment, in 80% of the subjects (CI 95%: 69.5-90.4) (Table 2).

Analysis of DIE lesions by compartment were found in the anterior portion and commonly placed in vesical floor (6.6%), with 1-3 cm size in 3.3% and more than 3 cm in 3.3% of them. In medial compartment the most affected organ was the ovary in 70% (CI 95%: 58.4-81.5). Right ovary was the most influenced in 26.6% of them (CI 95%: 16.1-39.6). Size of the lesions most commonly found in this compartment; were higher than 3cm in 45% (CI 95%: 32.4 - 57.6). Related to posterior compartment, DIE lesions were more frequent in rectum and sigmoid colon (35%; CI 95%: 22.9-47.1) being the lesions

from 1-3cm the most common ones (33.3%; CI 95%: 21.4-45.2). Other unusual lesions were found in bowel, appendix and abdominal wall. (Table 3)

In regard to distribution and severity of the lesions according to rEnzian Classification which does not consider ovaries affection; type C2 (affection to rectum and sigmoid colon with 1-3cm lesions) was the most commonly found in 23.3%, followed by type B3 (uterus sacral ligaments with lesions higher than 3cm) in 10% (Table 4).

Discussion

Infiltrating lesions from DIE are defined as solid focused lesions which invade 5mm deep or more of organ serosa. [13] Some reports indicate that 95% of the lesions involve serosa and muscularis propria, meanwhile only 38% affect submucosal and 6% mucosal. [14]

DIE is a usual cause of chronic pelvic pain in reproductive-age women, in general it is associated with anatomical location and invasion degree of the lesions (>5mm), [15-17] which agrees with the findings in this case series where chronic pelvic pain was the most frequent sign for surgical procedure.

Many endometriosis symptoms are masked with other medical conditions, delaying diagnosis for about 5-10 years when patients have had, in average, 7 medical sessions without a correct diagnosis due to disease unawareness from first contact physician and patient itself; who consider symptoms as normal. [18]

The importance of a classification to describe a disease relies on understanding its limits, use the same language when reporting the clinical entity and reproduce the study within the same terms.

In this trial of 60 cases, using Enzian Classification 2005; medial compartment was found as the most affected one in 80% of the cases (mainly ovarian endometriomas), followed by posterior compartment in 65% (mainly rectum and sigmoid colon) and less frequent, anterior compartment (vesical affection).

Related to anatomical distribution of endometriosis lesions and a probable physiopathogenic implication; a study revealed that the most affected compartment is the posterior one (93.4%) and mainly the left side (67.8%) and, less frequent, the anterior one with vesical affection (6%). [13] This vesical affection report (anterior compartment) is in agreement with findings in this series of 60 cases where a 6.6% was shown, nevertheless, differs with other reported studies where 85% in bladder, 10% in ureter and 4% in kidney lesions, were found. [19]

Therefore, it could be concluded that DIE is an entity that affects female pelvis asymmetrically, being more common in the posterior portion and left side of the uterus, this might be explained by the presence of rectum and sigmoid colon in that side of the pelvis, modifying peritoneal flux in both hemipelvis, thus, blood drops retrogradely during menstruation and accumulates in this place of the pelvis leading to endometrial cells implantation and disease development. [13]

Presence of endometriomas (medial compartment) could be a marker of endometriosis severity, mainly DIE. In the present series of 60 cases with DIE, 70% of the patients showed an endometrioma more often on the right than on the left side, in disagreement with a previous study hypothesis proposing anatomical distribution of the pelvis. This frequency is similar to 77% of endometriomas in DIE patients (rectum and sigmoid colon involvement) compared with 21% without endometrioma (RR: 6.96; CI 95%: 4.04-12.00). [20]

Important to mention that ovarian endometriosis is a marker of spread pelvic disease; associated with cul-de-sac obliteration involving rectum, sigmoid colon and seromuscular layer of the bowel; which should be treated if surgical procedure favors the patient even when ovarian affection absence does not discard a DIE possibility. [21]

Even more, uterosacral ligaments affection could be a marker of ureteral involvement by DIE. [22, 23] In a study with 463 DIE patients with presurgical transvaginal ultrasound; 111 of them showed uterosacral ligaments involvement. Ureter affection was associated to ovarian mobility, ureteral changes on the right side, nodule size of uterosacral ligaments (USL) and endometrioma on the left side, particularly when USL were 1.75-1.95 cm, in the right and left sides, respectively. [22]

Enzian Classification in 2005 was poorly accepted due to its complex clinical application, so it was revised and modified in 2011 (rEnzian). [8, 9] This 2005 review, only included affection of endometriosis from the posterior compartment. In the revised classification, posterior compartment of the uterus is divided in three A, B, C and F and severity goes with nodule size (G1, G2 y G3); in such a way that a TNM staging could be used as in malignant diseases, thus, a presurgical description of involved organs using the compartment and severity of the lesion, is possible. For example, a presurgical patient with DIE using Enzian Classification would be A0 B1 C2 F (With no lesions in rectovaginal septum and vagina, with less than 1cm lesions in uterosacral ligaments and pelvic wall and 1-3cm lesions in sigmoid colon).

In the present 60 case series, the most affected compartment was C with 21 cases, from these 14 cases were Grade 2; so, to describe this lesion it should be classified as C2, which means that the most affected sites in patients of this trial were rectum and sigmoid colon with infiltrative lesions from 1-3 cm. This implies that patient would require a discoid or segmental resection of those organs, then, surgeon should anticipate instrumental provisions, surgical time and, very important, multidisciplinary team to carry on

the procedure. In México and other countries around the world there is few knowledge of DIE treatment as a multidisciplinary disease, where imaging expert and surgeon work together with a close communication to handle a DIE patient.

One of the biggest problems for physicians is having a presurgical diagnostic confidence of the disease relying on cost/benefit and less invasive techniques as ultrasound that in skilled experts has an excellent sensibility and specificity to diagnose DIE, even similar to magnetic resonance. [24, 25] Unfortunately, most hospital centers in México lack of trained personnel to diagnose DIE, because they have never faced this problem in the past or known about its existence.

The same happens with DIE surgical treatment as a multidisciplinary entity; few groups at national level work on DIE integral treatment but, with that goal, an accurate diagnostic of involved organs is required in order to anticipate the needs for a correct management, as mentioned, thus, rEnzian Classification becomes useful like in the present study where, even with a small sample, frequency of affected organs was described clearly and could simplify pre and post-surgical reports.

Synopsis: Deeply infiltrating endometriosis occurs mainly in young women with pelvic pain and lesions are often located in C2 compartment according to rEnzian Classification.

Author Contributions

All authors have participated and contributed sufficiently for the completion of this manuscript.

Conflict Of Interests

Authors have no conflict of interests to declare.

Authors have no financial conflicts to declare

References

1. Wang G, Tokushige N, Markham R, Fraser IS. Rich innervation of deep infiltrating endometriosis. *Hum Reprod.* 2009;24:827-34. Available from: <https://academic.oup.com/humrep/article/24/4/827/632224>
2. Sangi-Haghpeykar H, Poindexter AN 3rd. Epidemiology of endometriosis among parous women. *Obstet Gynecol.* 1995;85:983-92. Available from: <https://www.sciencedirect.com/science/article/pii/S0029784495000742>
3. Steele RW, Dmowski WP, Marmer DJ. Immunologic Aspects of Human Endometriosis. *Am J Reprod Immunol.* 1984;6:33-6. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1600-0897.1984.tb00106.x>
4. Sinaii N, Plumb K, Cotton L, Lambert A, Kennedy S, Zondervan K, et al. Differences in characteristics among 1,000 women with endometriosis based on extent of disease. *Fertil Steril.* 2008;89:538-45. Available from: <https://www.sciencedirect.com/science/article/pii/S0015028207007911>
5. Dunselman GAJ, Vermeulen N, Becker C, Calhaz-Jorge C, D'Hooghe T, De Bie B, et al. ESHRE guideline: management of women with endometriosis. *Hum Reprod.* 2014;29:400-12. Available from: <https://academic.oup.com/humrep/article/29/3/400/707776>
6. Revised American Society for Reproductive Medicine classification of endometriosis: 1996. *Fertil Steril* 1997;67:817-21.
7. Haas D, Shebl O, Shamiyeh A, Oppelt P. The rASRM score and the Enzian classification for endometriosis: their strengths and weaknesses. *Acta Obstet Gynecol Scand.* 2013;92:3-7. Available from: <https://obgyn.onlinelibrary.wiley.com/doi/abs/10.1111/aogs.12026>
8. Tuttlies F, Keckstein J, Ulrich U, Possover M, Schweppe KW, Wustlich M, et al. ENZIAN-score, a classification of deep infiltrating endometriosis. *Zentralbl Gynakol.* 2005;127:275-81. Available from: <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-2005-836904>
9. Stiftung Endometriose Forschung. The revised Enzian classification. Consensus meeting, 7th Conference of the Stiftung Endometriose Forschung (SEF) (Foundation for Endometriosis Research), Hotel Enzian, Weissensee, Austria, February 25–27, 2011. Weissensee, Austria, 2011.
10. Haas D, Oppelt P, Shebl O, Shamiyeh A, Schimetta W, Mayer R. Enzian classification: does it correlate with clinical symptoms and the rASRM score?. *Acta Obstet Gynecol Scand.* 2013;92:562-6. Available from: <https://obgyn.onlinelibrary.wiley.com/doi/abs/10.1111/aogs.12118>
11. Haas D, Chvatal R, Habelsberger A, Wurm P, Schimetta W, Oppelt P. Comparison of revised American Fertility Society and ENZIAN staging: a critical evaluation of classifications of endometriosis on the basis of our patient population. *Fertil Steril.* 2011;95:1574-8. Available from: <https://www.sciencedirect.com/science/article/pii/S0015028211001695>
12. Haas D, Wurm P, Shamiyeh A, Shebl O, Chvatal R, Oppelt P. Efficacy of the revised Enzian classification: a retrospective analysis. Does the revised Enzian classification solve the problem of duplicate classification in rASRM and Enzian?. *Arch Gynecol Obstet.* 2013;287:941-5. Available from: <https://link.springer.com/article/10.1007/s00404-012-2647-1>

13. Chapron C, Chopin N, Borghese B, Foulot H, Dousset B, Vacher-Lavenu MC, et al. Deeply infiltrating endometriosis: pathogenetic implications of the anatomical distribution. *Human Reprod.* 2006;21:1839-45. Available from: <https://academic.oup.com/humrep/article/21/7/1839/2938550>
14. De Cicco C, Corona R, Schonman R, Mailova K, Ussia A, Koninckx PR. Bowel resection for deep endometriosis: a systematic review. *BJOG.* 2011;118:285-91. Available from: <https://obgyn.onlinelibrary.wiley.com/doi/abs/10.1111/j.1471-0528.2010.02744.x>
15. Abrao MS, Podgaec S, Dias JA Jr, Averbach M, Ferraz Silva LF, Marino de Carvalho F. Endometriosis Lesions That Compromise the Rectum Deeper than the Inner Muscularis Layer Have More Than 40% of the Circumference of the Rectum Affected by the Disease. *J Minim Invasive Gynecol.* 2008;15:280-5. Available from: <https://www.sciencedirect.com/science/article/pii/S1553465008000381>
16. Donnez J, Squifflet J. Laparoscopic excision of deep endometriosis. *Obstet Gynecol Clin N Am.* 2004;31: 567-580. Available from: <https://www.sciencedirect.com/science/article/pii/S0889854504000683?via%3Dihub>
17. Howard FM. The role of laparoscopy in the evaluation of chronic pelvic pain: Pitfalls with a negative laparoscopy. *J Minim Invasive Gynecol.* 1996;4:85-94. Available from: [https://www.jmig.org/article/S1074-3804\(96\)80116-2/abstract](https://www.jmig.org/article/S1074-3804(96)80116-2/abstract)
18. Ballard K, Lowton K, Wright J. What's the delay? A qualitative study of women's experiences of reaching a diagnosis of endometriosis. *Fertil Steril.* 2006;86:1296-301. Available from: <https://www.sciencedirect.com/science/article/pii/S0015028206035229>
19. Yohannes P. Ureteral Endometriosis. *J Urol.* 2003;170:20-5. Available from: <https://www.sciencedirect.com/science/article/pii/S0022534705634258>
20. Banerjee SK, Ballard KD, Wright JT: Endometriomas as a Marker of Disease Severity. *J Minim Invasive Gynecol.* 2008;15:538-540. Available from: <https://www.sciencedirect.com/science/article/pii/S155346500800215X>
21. Redwine DB, Wright JT. Laparoscopic treatment of complete obliteration of the cul-de-sac associated with endometriosis: long-term follow-up of en bloc resection. *Fertil Steril.* 2001;76:358-65. Available from: <https://www.sciencedirect.com/science/article/pii/S0015028201019136>
22. Lima R, Abdalla-Ribeiro H, Nicola AL, Eras A, Lobao A, Ribeiro PA. Endometriosis on the uterosacral ligament: a marker of ureteral involvement. *Fertil Steril.* 2017;107:1348-54. Available from: <https://www.sciencedirect.com/science/article/pii/S0015028217303461>
23. Carfagna P, De Cicco Nardone C, De Cicco Nardone A, Testa AC, Scambia G, Marana R et al. Role of transvaginal ultrasound in evaluation of ureteral involvement in deep infiltrating endometriosis. *Ultrasound Obstet Gynecol.* 2017;51:550-5. Available from: <https://obgyn.onlinelibrary.wiley.com/doi/abs/10.1002/uog.17524>
24. Turocy JM, Benacerraf BR. Transvaginal sonography in the diagnosis of deep infiltrating endometriosis: A review. *J Clin Ultrasound.* 2017;45:313-8. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/jcu.22483>
25. Exacoustos C, Lazzeri L, Zupi E. Expert sonographers and surgeons are needed to manage deep infiltrating endometriosis. *Ultrasound Obstet Gynecol.* 2017;49:417. Available from: <https://obgyn.onlinelibrary.wiley.com/doi/full/10.1002/uog.17415>

Table 1. General characteristics of the studied population.

Characteristic	Mean or Frequency (%)	CI 95%
Age (years)	30.5	28.6 – 32.3
BMI (Kg/m ² SC)	25.7	24.8 – 26.5
Nulliparous	68.3% (n=41)	55.0 - 79.7
One or more pregnancies	31.7% (n=19)	20 - 43.4
One or more cesareans	18.3% (n=11)	9.5 - 30.4
One or more abortions	13.3% (n=8)	5.93 - 24.5
Number of previous medical visits to diagnostic of the disease	7	5.97 – 8.03
Main symptoms		
Pain	85% (n=51)	73.4 - 92.9
Infertility	8.3% (n=5)	2.7 - 18.3
Bleeding	6.6% (n=4)	1.8 - 16.1

Table 2. Location of deep infiltrating lesions by compartment

Compartment	Frequency (%)	CI 95% ^a
Anterior	6.6 (n=4)	1.8 – 16.1
Medial	80 (n=48)	69.5 – 90.4
Posterior	65.0 (n=39)	32.1 – 58.3

^a CI 95%: Confidence Interval of 95%**Table 3. Distribution and size of deep infiltrating lesions by compartment**

Compartment	Frequency (n)	CI 95%
Anterior		
Vesical wall	6.6 (n=4)	1.8 – 16.1
Size of the lesion		
Nodule de 1 - 3 cm	3.3 (n=2)	0.40 – 11.5
Nodule > 3 cm	3.3 (n=2)	0.40 – 11.5
Medial		
Uterus	10 (n=6)	3.7 – 20.5
Ovaries	70 (n=42)	58.4 – 81.5
Right ovary	26.6 (n=16)	16.1 - 39.6
Left ovary	21.6 (n=13)	12.1 - 34.2
Both ovaries	21.6 (n=13)	12.1 – 34.2
Size of the lesion		
1- 3 cm	25.0 (n=15)	14.7 – 37.8
>3 cm	45.0 (n=27)	32.4 – 57.6
Posterior		
A) Recto-vaginal septum and vagina	6.6 (n=4)	.31 – 12.8
B) Uterosacral and torus uterinus' ligaments	23.3 (n=14)	12.6 – 33.9
C) Rectum and sigmoid colon	35.0 (n=21)	22.9 - 47.1
Size of the lesion		
<1 cm	11.7 (n=7)	3.5 - 19.8
1 - 3 cm	33.3 (n=20)	21.4 - 45.2
> 3 cm	20.0 (n=12)	9.8 - 30.1
Other locations		
FA	16.6 (n=10)	7.2 - 26.0
FI	3.3 (n=2)	0.40 – 11.5
FO	5.0 (n=3)	0.51 - 10.5

FA: Adenomyosis; FI: Intestinal; FO: Appendix (n=2) and abdominal wall (n=1)

Table 4. Distribution and severity of deeply infiltrating endometriosis in agreement to revised Enzian classification (2011)

Severity	Location % (n)						
	A	B	C	FV	FA	FI	FO
Grade 1 <1 cm	0	8.3 (5)	3.3 (2)	0	0	3.3 (2)	3.3 (2)
Grade 2 1-3 cm	5.0 (3)	5.0 (3)	23.3 (14)	1.7 (1)	10.0 (6)	0	0
Grade 3 >3 cm	1.7 (1)	10.0 (6)	8.3 (5)	0	6.6 (4)	0	1.7 (1)

A: Rectovaginal septum and vagina; B: Uterosacral ligaments and pelvic wall; C: Rectum and sigmoid colon; FV: Vesical FA: Adenomyosis; FI: Intestinal; FO: Appendix and abdominal wall

Uncorrected Proof