Codification for minimally invasive surgery for deep endometriosis

Codificação em cirurgia de endometriose profunda minimamente invasiva Codificación em cirugía de endometriosis profunda por minima invasión

RESUMO

Neste artigo, os autores os autores preparam um guia para os ginecologistas codificarem corretamente as cirurgias laparoscópicas de alta complexidade para tratamento de endometriose severa. De acordo com a topografia da doença (pélvica ou extrapélvica, genital ou extragenital) e com o procedimento cirúrgico realizado, a tabela CBHPM pode ser utilizada para a codificação da cirurgia. A codificação exata dos passos cirúrgicos do procedimento garante informações comparáveis e de alta qualidade para que se tenha um controle adequado do tratamento prestado às pacientes. DESCRITORES: Endometriose; Laparoscopia; Classificação Internacional de Doenças; Procedimentos Cirúrgicos Minimamente Invasivos; Planejamento em Saúde

ABSTRACT

In this article, the authors prepare a guide for gynecologists to correctly code high-complexity laparoscopic surgeries for the treatment of severe endometriosis. According to the topography of the disease (pelvic or extrapelvic, genital or extragenital) and the surgical procedure performed, the CBHPM table can be used to code the surgery. The exact coding of the surgical steps of the procedure guarantees comparable and high-quality information so that there is adequate control of the treatment provided to patients.

DESCRIPTORS: Endometriosis; Laparoscopy; International Classification of Diseases; Minimally Invasive Surgical Procedures; Health Planning

RESUMEN

En este artículo, los autores preparan una guía para que los ginecólogos codifiquen correctamente las cirugías laparoscópicas de alta complejidad para el tratamiento de la endometriosis severa. Según la topografía de la enfermedad (pélvica o extrapélvica, genital o extragenital) y el procedimiento quirúrgico realizado, la tabla CBHPM puede ser utilizada para codificar la cirugía. La codificación exacta de los pasos quirúrgicos del procedimiento garantiza información comparable y de alta calidad para que exista un adecuado control del tratamiento brindado a las pacientes. DESCRIPTORES: Endometriosis; Laparoscopía; Clasificación Internacional de Enfermedades; Procedimientos Quirúrgicos Mínimamente Invasi-

RECEBIDO EM: 19/09/2022 **APROVADO EM:** 02/11/2022

William Kondo

vos; Planificación en Salud.

Department of Gynecological Surgery at Hospital Vita Batel, Curitiba – PR. ORCID: 0000-0005-2857-9984

Guilherme Karam Corrêa Leite

Assistant Professor of the Discipline of Women's Health at the Metropolitan University of Santos (UNIMES); Master in Obstetrics and Gynecology (FSMSCSP) and Director of the Núcleo Santista de Endometriosis. ORCID: 0000-0001-6820-7620

Fabio Morozetti Ramajo

Coordinator of the Gynecology and Obstetrics Service at Casa de Saúde de Santos; member of the Commission for Professional Enhancement of the Society of Obstetrics and Gynecology of São Paulo (SOGESP). ORCID: 0000-0001-8044-4354

Patrick Bellelis

Assistant Physician in the Endometriosis Sector at the Hospital das Clínicas of the Faculty of Medicine of USP (HCFMUSP) and member of the National Commission on Endometriosis of the Brazilian Federation of Gynecology and Obstetrics (FEBRASGO). ORCID: 0000-0001-8044-4354



Kondo, W., Leite, G. K. C., Ramajo, F. M., Bellelis, P., Fernandes, R., Magalhães, R. R., Vieira, M. C., Rocha, C. L. Codification for minimally invasive surgery for deep endometriosis

Rodrigo Fernandes

Assistant Physician at ICESP (Cancer Institute of the State of São Paulo), unit of the Hospital das Clínicas of the Faculty of Medicine of USP (HCFMUSP), Co-director of the Endometriosis and Minimally Invasive Surgery Courses at IRCAD Latin America. Ambassador of the World Endometriosis Society. ORCID: 0000-0002-5264-2166

Raquel Reis Magalhães

Physician Specialist in Gynecology and Obstetrics and in the field of Gynecological Endoscopy (AMB/FEBRASGO).

Mariana da Cunha Vieira

Medical specialist in Gynecology and Obstetrics and in the field of Gynecological Endoscopy (AMB/FEBRASGO). ORCID: 0000-0003-2527-8407

Claudia Lima Rocha

Medical specialist in Gynecology and Obstetrics and in the field of Gynecological Endoscopy (AMB/FEBRASGO). ORCID: 0000-0003-1557-2055

INTRODUCTION

ndometriosis is a disease that affects I about 10 to 15% of women of reproductive age. (1) It is the presence of endometrial tissue in other locations outside the uterine cavity. Adenomyosis corresponds to the presence of intramyometrial ectopic tissue. Ovarian endometrioma corresponds to the cystic lesion of endometriosis within the ovarian parenchyma. Peritoneal or superficial endometriosis corresponds to small implants of the disease, which do not deeply infiltrate the subendometrial tissue. Deep endometriosis is an implant that infiltrates more than 5 mm below the peritoneum (retroperitoneal disease). (2)

Surgical treatment of deep endometriosis is best performed in referral centers or by surgeons experienced in the management of the disease, since the best result in terms of symptomatic relief and increased pregnancy rates. Long-term control is obtained when complete resection of the disease is performed, reducing the persistence of lesions, when only cauterization of foci is performed. In advanced stages, it is a major surgery involving multiple surgical procedures in the same surgical procedure, which is associated with a greater or lesser risk of complications according to the surgeon's experience. (3,4)

Correct coding of the surgical proce-

dure can help standardize surgical data (5) in order to establish a precise relationship between intraoperative findings and preoperative imaging tests (6,7), with intraoperative and postoperative complication rates and with postoperative follow-up exams, in order to enable better monitoring of the quality of the surgical treatment offered to patients.

Thus, the aim of this article is to prepare a guide for gynecologists to correctly code high-complexity laparoscopic surgeries for the treatment of severe endometriosis in order to ensure comparable and high-quality epidemiological information regarding surgical coding.

METHOD

This is a literature review of Pubmed, Scielo and Lilacs digital libraries, using the search terms Endometriosis, Endometriosis Treatment, Surgical Procedures and Laparoscopy. The selection criteria for the papers were: relevance, journal impact factor and number of citations of the article. Thirty-four articles presented in this study were selected for having better methodology and higher level of evidence. In addition, the International Code of Diseases (ICD-10) was revised (8) and the Brazilian Hierarchical Code of Medical Procedures (CBHPM - 5th Edition). (9)

RESULTS

The results will be presented in a structured way, initially introducing the reader to the context of endometriosis surgery coding in Brazil and, subsequently, analyzing the literature by topography of the organs most frequently affected by the disease.

Most Used Encodings in Brazil

Table 1 shows endometriosis-specific ICD 10 (8) codes and other examples that can be used generically or in urgent situations to classify the disease based on symptoms.

There are only 2 codes in the CBHPM (9) table that mention the surgical treatment of endometriosis:

- 3.13.07.18-3 Peritoneal endometriosis - surgical treatment via laparoscopic
- 3.13.07.04-3 Peritoneal endometriosis - surgical treatment

One of them refers to the treatment of peritoneal endometriosis by laparoscopy and the other by conventional open surgery. Both, however, correspond to the treatment of the peritoneal form of the disease (superficial endometriosis), without making any mention of any specific type of deep endometriosis.

The code 3.13.07.28-0 (Endometrio-

sis - surgical treatment via laparoscopic) appeared in an attempt to correspond to the treatment of deep endometriosis, opposing the previous codes that refer to superficial endometriosis. However, in addition to not yet being authorized by most supplementary health operators, It has a surgical size equivalent to the treatment of peritoneal endometriosis by laparoscopy and does not accurately translate the surgical procedure performed, since the surgical treatment of deep endometriosis is a complex procedure with several procedures within the same surgery.

Therefore, surgeons specializing in endometriosis must usually use other codes from the CBHPM table to be able to fully code the surgical procedure, especially in cases where there is multiple involvement (10,11), de modo a conseguir traduzir na forma de códigos o procedimento cirúrgico realizado.

Next, we detail the coding that can be used in the complete surgical treatment of endometriosis, based on anatomical and topographical concepts.

Anatomical **Topographic** Classification of Endometriosis

Endometriosis implants can affect structures in the genital tract (uterus, tubes, ovaries, uterine ligaments) and outside the genital tract (extragenital endometriosis). (11) Extragenital implants can be located in the pelvic and extrapelvic region. Pelvic extragenital implants can be seen in the abdominal wall (parietal implants in scar from cesarean section and/ or previous gynecological laparoscopies), in the urinary tract (bladder and ureter), in the gastrointestinal tract (rectosigmoid) and in the pelvic innervation. Extragenital extrapelvic implants can affect the abdominal wall (navel), urinary tract (extrapelvic ureter and kidney), gastrointestinal tract (descending colon, small intestine, ileocecal valve, appendix, cecum), diaphragm, chest, etc. The most frequent extrapelvic extragenital implants are those involving the intestine in the lower right quadrant and, subsequently, thoracic

Table 1. Codes according to the International Classification of Diseases and Related Health Problems (also known as the International Classification of . Diseases – ICD 10). (8)

Endometriosis specific codes		
N80	Endometriosis	
N80.0	Endometriosis of the uterus	
N80.1	Ovarian endometriosis	
N80.2	Endometriosis of the fallopian tube	
N80.3	Endometriosis of the pelvic peritoneum	
N80.4	Endometriosis of the rectovaginal septum and vagina	
N80.5	Bowel endometriosis	
N80.6	Cutaneous scar endometriosis	
N80.8	Other endometriosis	
N80.9	Unspecified endometriosis	
Endometriosis-related codes (examples)		
N73.6	Pelvic-peritoneal adhesions	
N83	Non-inflammatory disorders of the ovary, fallopian tube, and broad ligament	
N92	Bleeding from the uterus or vagina	
N97	Female infertility	
R10.2	Abdominal and pelvic pain	
Source: author		

endometriosis.

UTERUS

Table 2 (Uterus) shows the treatment options, clinical or surgical, for women with adenomyosis. The levonorgestrel-releasing device (LNG-IUS) (12) It is a very promising hormonal drug treatment. Its correct positioning may require a hysteroscopy.

The definitive treatment of adenomyosis is performed through total hysterectomy with bilateral salpingectomy (13), in women with no desire to reproduce, with severe symptoms and who have not responded to other therapies.

Conservative surgical treatments for adenomyosis can be performed laparoscopically (14) or by hysteroscopy, depending on the characteristics of the disease.

TUBES

Patients with more advanced age, without reproductive desire or with established offspring should undergo bilateral salpingectomy as a form of definitive treatment. This procedure may also be necessary in nulliparous women or women with reproductive desire who have a double tubal lesion, proximal lesion, stage III or IV endometriosis with bilateral hydrosalpinx, or severe peritubal adhesions, so that the pregnancy rate is higher in a future IVF.

In the case of tubal involvement by deep lesions that present positive chromotubation, complete excision of the disease can be carried out. Superficial lesions can be treated with simple fulguration or careful excision of the lesion. Other therapeutic options include fimbrioplasty and salpingolysis. (Table 2)

The preservation of the ovaries in endometriosis surgery is of paramount importance for the maintenance of hormonal and reproductive function. It is



	Table 2. Codes from the CBHPM* Table used for coding uterine, ovarian and tubal surgery. (9)		
Uterus			
Clinical treatme	nt		
3.13.03.29-3	Hormonal intrauterine device (IUD) implantation	Clinical treatment of adenomyosis	
4.02.01.15-5	Diagnostic hysteroscopy	Check position, reposition or remove device In retroverted, soft or isthmocele uteri, decreases risk of uterine perforation during insertion	
Surgical treatme	ent		
3.13.03.17-0	Surgical hysteroscopy with directed biopsy, syne- chiae lysis, foreign body removal	Treatment of concomitant intracavitary diseases	
3.13.03.18-8	Hysteroscopy with resectoscope for myomectomy, polypectomy, metroplasty, endometrectomy and synechiae resection	Treatment of concomitant intracavitary diseases Adenomyomectomy Endometrial ablation	
3.13.07.20-5	Laparoscopic release of pelvic adhesions with or without resection of peritoneal cysts or salpingolysis	Release of pelvic adhesions from previous surgery or adhesions from endometriosis	
3.13.03.21-8	Laparoscopic total hysterectomy	Removal of the uterus without attachments, for the treatment of adenomyosis	
3.13.03.23-4	Laparoscopic total hysterectomy with uni or bilateral adnexectomy	Removal of the uterus with attachments, for the treatment of adenomyosis	
3.09.06.12-1	Ligation of the hypogastric artery (uterine branch) - unilateral - any technique	Decrease intraoperative bleeding in hysterectomy of large uterus and adenomyomectomy	
3.13.03.24-2	Laparoscopic metroplasty	Uterine reconstruction in adenomyomectomy	
3.13.03.25-0	Laparoscopic uterine myomectomy	Proximity code for adenomyomectomy	
3.13.03.15-3	Trachelectomy - amputation, conization	Cervical removal in women previously submitted to subtotal hysterectomy	
Tubes			
3.13.04.07-9	Unilateral or bilateral laparoscopic tubal recanalization	Women with previous tubal ligation	
3.13.04.08-7	Laparoscopic uni or bilateral salpingectomy	Remove tubal lesion without possibility of reversal	
3.13.04.06-0	Laparoscopic distal neosalpingostomy	Tuboplasty of the fimbriae (fimbrioplasty)	
3.13.07.20-5	Laparoscopic release of pelvic adhesions with or without resection of peritoneal cysts or salpingolysis	Release of peritubal adhesions improves tubal motility	
Ovaries			
3.13.05.03-2	Uni or bilateral laparoscopic oophorectomy or uni or bilateral oophoroplasty	Endometrioma in women without reproductive desire can be treated with oophorectomy Ovarian cystectomy or other ovarian-sparing techniques should be performed in women with a reproductive desire.	
3.13.07.18-3	Peritoneal endometriosis - surgical treatment via laparoscopic	Complete eradication of the disease is mandatory (19) In endometriomas attached to the ovarian fossa, removal of the peritoneum from the ovarian fossa is part of the complete treatment of the disease. (20)	
3.11.02.50-6	Unilateral laparoscopic ureterolysis	As the endometrioma is adhered to the ovarian fossa in the course of the ureter, (21) ureterolysis is usually necessary.	
First column = CBHPM Table Code			

First column = CBHPM Table Code Second column = Procedure according to CBHPM Table Third column = Justification of the need for the procedure

^{**}CBHPM (Classificação Brasileira Hierarquizada de Procedimentos Médicos - Brazilian Hierarchical Classification of Medical Procedures) had its first edition in 2003. It arose from the need for doctors to rescue the prerogative of recovering the value of their work in the supplementary health system (health plan operators). Fruit of the union of the main national medical entities (AMB, CFM and FENAM), state entities and Specialty Societies, began to be progressively incorporated in Brazil by different health operators, culminating in the recognition of the ANS (Agência Nacional de Saúde - National Supplementary Health Agency), which even uses the CBHPM procedures to update its ROL.

common to be adhered to the ovarian pit, making ureterolysis a mandatory procedure in the treatment of the peritoneum of this topography (Table 2). Small endometriomas (smaller than 30 mm) can be aspirated, irrigated and their bed, coagulated or vaporized. Endometriomas larger than 30mm, in turn, can be addressed in 3 ways:

- Ovarian cystectomy using the modified stripping technique (15,16)
- 3-step approach: laparoscopic drainage, 3 months of clinical treatment with GnRH analogue and new laparoscopy for laser vaporization of intracystic endometriotic implants (17)
- Laser vaporization in cysts less than 100mm. (18)

PERITONEAL ENDOMETRIOSIS

Surgeries to treat peritoneal endometriosis are usually simpler than for other forms of the disease (Table 3). However, depending on the extent and location of peritoneal endometriosis involvement, even laparoscopic surgery for this form of the disease can still be very challenging and require ureterolysis, resections close to the bladder or bowel, etc.

PARIETAL ENDOMETRIOSIS

Endometriosis can implant in scars, natural (navel) or post-surgical (navel, cesarean, laparoscopy or laparotomy incisions, episiorrhaphy). The surgical treatment of these parietal implants involves resection of the nodule with a small margin of safety so that the complete resection of the disease is performed without, however, removing excessively healthy tissue. Bulky lesions (greater than 25 to 30mm) may require mesh positioning to prevent future herniation. In rare cases, the nodule may be subaponeurotic and a laparoscopic approach may be indicated (Table 3).

ANTERIOR COMPARTMENT OF THE PELVIS (Table 4)

Round ligament and vesicouterine septum injuries are treated with simple resection. It is important to perform re-

Table 3. Codes from the CBHPM Table used for coding superficial and parietal endometriosis surgery. (9) Superficial endometriosis

3.13.07.18-3	Peritoneal endometriosis - surgical treatment via laparoscopic	Corresponds to the treatment of superficial (peritoneal) endometriosis	
Parietal endometriosis			
3.13.07.12-4	Pelvic abdominal wall tumor resection	Treatment of endometriosis of the abdominal wall	
3.13.07.25-6	Laparoscopic abdominal wall tumor resection	Treatment of endometriosis of the abdominal wall that infiltrates below the aponeurosis	
Source: author.			

Table 4. Codes from the CBHPM Table used for coding anterior pelvic compartment surgery. (9)

		Bladder
4.02.01.06-6	Cystoscopy and/or ure- throscopy	Assessment of nodule size and distance from the ureteral meatus
3.11.02.05-0	Unilateral double J cystoscopic placement	The passage of the double J catheter by cystoscopy can help in the reconstructive time of the cystectomy When it is impossible to pass the double J catheter due to ureter infiltration, there may be a need for ureteral reimplantation
3.11.03.52-9	Laparoscopic partial cystectomy	Partial extramucosal cystectomy (shaving) for the treatment of a nodule with superficial detrusor infiltration Partial (full-thickness) cystectomy to resect nodules that compromise even the mucosa
Retrovesical and intravesical ureter		
3.11.02.04-2	One-sided double J surgi- cal placement	During ureteral reimplantation, the double-J catheter is passed directly laparoscopically.
3.11.02.54-9	Unilateral laparoscopic ureterovesical reimplan- tation	When there is intravesical or retrovesical ureter infiltration, ureteral reimplantation is necessary.
Source: author.		

section of the underlying infiltrated myometrium (approximately 5 to 10 mm in depth, depending on tissue involvement) so that the disease is completely removed.

Depending on the degree of bladder infiltration, complete resection of the nodule can be achieved by either a shaving or a partial cystectomy. (22)

In the case of surgical approach to a large bladder nodule that affects the vicinity of the trigone and ureter, cystoscopy plays a fundamental role. In situations of intravesical or retrovesical ureter infiltration, ureteral reimplantation is necessary.



(23)

POSTERIOR PELVIS COMPARTMENT (Table 5)

Lateral (uterosacral ligaments) or central (retrocervical and/or rectovaginal septum) lesions greater than 30 mm extending to the lateral pelvic wall often require ureterolysis and neurolysis to treat periureteral disease and nerve preservation, respectively. (22,24)

In case of infiltration of the posterior vaginal fornix, it must be detached from the posterior wall of the uterine cervix and resected. (22,25,26) Lesions that exclusively infiltrate the rectovaginal septum can be treated only with resection of this

The most appropriate surgical technique for treating endometriosis in the rectosigmoid depends on the symptoms and preoperative findings on imaging (6.7) as well as intraoperative findings. Small lesions can be treated with conservative "nodulectomy" techniques (22,25,26,27) and multiple, bulky and/or stenosing lesions should be treated using the intestinal segmental resection technique.

Depending on the degree of involvement, the ureter may require simple ureterolysis, ureterolysis with a double-J catheter, segmental resection with end--to-end anastomosis, or ureteral reimplantation. (23,24)

EXTRAPELVIC ORGANS (Table 6)

KIDNEY

The decision to perform nephrectomy should be made in conjunction with the urologist after evaluating renal function. In addition to unilateral laparoscopic total nephrectomy, unilateral ureterectomy is performed. (23) In cases of ureterovesical junction obstruction or associated bladder nodule, the procedure to be performed would be nephroureterectomy with unilateral laparoscopic bladder resection.

APPENDIX, RIGHT COLON AND **TERMINAL ILEUM**

Chart 5. Codes from the CBHPM Table used for coding the surgery of the posterior compartment of the pelvis. (9)

Retrocervical region, uterosacral ligaments, posterior vaginal fornix, and rectovaginal septum		
3.13.07.27-2	Laparoscopic section of utero- sacral ligaments	Treatment of endometriosis by infiltrating the uterosacral ligaments
3.13.02.02-5	Colpectomy	Vaginal resection is required (full or partial thickness) in case of infiltration of the posterior vaginal fornix
3.13.06.06-3	Rectovaginal septum tumor resection	Treatment of endometriosis that infiltrates the rectovaginal septum Colpectomy should be associated if vaginal infiltration and intestinal resection if intestinal involvement
3.11.02.50-6	Unilateral laparoscopic urete- rolysis	The ureter is about 20 mm away from the cervical insertion of the uterosacral ligament. Safe resection of the uterosacral ligaments often requires prior ureterolysis.
3.14.03.36-0	Microsurgical treatment of compressive neuropathies (tumor, inflammatory, etc.)	Pelvic innervation is between the ureter and the uterosacral ligaments. Surgical procedure with neuropreservation should be performed whenever possible
	Rectosig	gmoid
3.10.03.23-0	Colotomy and colorraphy	Nodulectomies can be performed using (27):
		 Shaving Mucosal skinning Full-thickness resection of the anterior wall of the rectum: transanal discoid resection with a circular stapler (single or double), linear resection with a linear cutting endostapler laparoscopically, or resection with scissors or energy followed
3.10.03.79-6	Laparoscopic abdominal rectosigmoidectomy	Segmental resection of the rectosigmoid
3.10.03.21-4	Colostomy or enterostomy	Diversion of intestinal transit to protect colorectal anastomosis
3.10.03.59-1	Laparoscopic lowering surgery	Segmental resection of the rectosigmoid with complete removal of the rectum
3.10.03.61-3	Partial colectomy with colostomy by videolaparoscopy	Partial colon resection with colostomy
3.10.03.62-1	Partial colectomy without colostomy by videolaparoscopy	Partial colon resection without colostomy
	Parietal, retroligamentary, a	nd intraligamentary ureter
3.11.02.50-6	Unilateral laparoscopic urete- rolysis	Release of the ureter from periureteral fibrosis
4.02.01.06-6	Cystoscopy and/or urethros- copy	Passage of a double J catheter in case of reimplantation or segmental resection of the ureter

A simple appendectomy is sufficient for the treatment of endometriosis affecting the tip of the appendix. When there is involvement of its base or the cecum, a typhlectomy associated with appendectomy may be necessary. (29)

In the case of infiltration of the cecum, ileocecal valve and small intestine, nodule resection or segmental resection can be performed according to the size and specific location of each type of lesion.

DIAPHRAGM, PLEURA AND LUNG

Endometriosis can affect the thoracic and/or diaphragmatic region, manifesting itself in several clinical forms, including the thoracic endometriosis syndrome. (30,31)

Superficial diaphragmatic implants located in the muscular part can be treated with excisional or ablative techniques. (32) Larger implants and small diaphragmatic perforations should be resected, with subsequent suturing of the diaphragmatic defect, either laparoscopically alone, via VATS (video-assisted thoracoscopic surgery), or by combined access. (33)

The other entities included in the thoracic endometriosis syndrome are usually managed by thoracic surgeons.

DISCUSSION

The complexity of endometriosis represented by the multiple forms of clinical presentation, in pelvic and extrapelvic, genital and extragenital organs, makes it difficult to adapt just one code for the treatment of the disease. Each affected organ has its particularities in terms of clinical assessment and preoperative imaging, therapeutic options (clinical or surgical), risks of persistence, intra and postoperative complications and post-treatment follow-up. (21-29) Thus, we believe that the most appropriate way of proceeding with the surgical coding for the treatment of endometriosis is really based on the topography affected by the deep disease.

The correct description of the topography of the implants and the surgical procedures performed is of paramount

3.11.02.05-0	Unilateral double J cystoscopic placement	Passage of a double J catheter in case of reimplantation or segmental resection of the ureter
3.11.02.51-4	Unilateral laparoscopic ureteroureterostomy	Removal of ureter segment compromised with uretero-ureteral anastomosis
3.11.02.04-2	One-sided double J surgical placement	During ureteral reimplantation, the double-J catheter is passed directly laparoscopically.
3.11.02.54-9	Unilateral laparoscopic ureterovesical reimplantation	When there is extensive infiltration of the ureter, ureteral reimplantation is necessary.
Source: author.		

Table 6. Codes from the CBHPM Table used for coding extrapelvic endometriosis surgery. (9)

Kidney		
3.11.01.585	Unilateral laparoscopic total nephrectomy	Renal exclusion treatment
3.11.02.247	Unilateral ureterectomy	Removal of the ureter to the bladder
3.11.01.542	Nephroureterectomy with unilate- ral laparoscopic bladder resection	Treatment of bladder injury associated with renal exclusion
	Appendix, colon and t	erminal ileum
3.10.03.58-3	Videolaparoscopy appendectomy	Treatment of appendix endometriosis
3.10.03.62-1	Partial colectomy without colostomy by videolaparoscopy	Treatment of endometriosis in the cecum or ileocecal valve
3.10.03.67-2	Segmental enterectomy by video- laparoscopy	Segmental resection of infiltrated small intestine
Diaphragm, pleura and lung		
3.06.01.13-4	Diaphragm tumor resection and reconstruction (any technique)	Endometriosis diaphragmatic nodule treatment
3.08.06.05-4	Diaphragmatic hernia – video surgical treatment	Treatment of endometriosis-related dia- phragmatic hernia
3.08.04.13-2	Thoracostomy with closed pleural drainage	Treatment of catamenial pneumothorax, catamenial hemothorax, or endometriosis-related pleural effusion
3.08.04.18-3	Video pleuroscopy	Can be used for visualization and biopsy of pleural or pulmonary lesions
3.08.04.19-1	Video localized pleural tumor resection	Removal of endometriosis pleural nodules
3.08.03.23-3	Videothoracoscopic segmentectomy	Treatment of intrathoracic endometriotic nodules
3.08.04.17-5	Video pleurodesis	Attempted treatment of recurrent catamenial pneumothorax
3.08.03.21-7	Lung lobectomy by videothora- coscopy	Treatment of intrathoracic endometriotic nodules
Source: author.		

ondo, W., Leite, G. K. C., Ramajo, F. M., Bellelis, P., Fernandes, R., Magalhães, R. R., Vieira, M. C., Rocha, C. L. Codification for minimally invasive surgery for deep endometriosis

importance in order to differentiate in the postoperative period the women who have persistence or recurrence of the disease and/or persistence or recurrence of symptoms. (19) Furthermore, it allows evaluating the quality of care provided by specialist surgeons as well as the rates of intra and postoperative complications of each group. More consistent and uniform data contribute to clinical research, allowing access to better evidence with less bias related to the accuracy of the information reported by surgeons.

Women with endometriosis often consult several specialists during their lifetime and the exact knowledge of the procedures already performed can be very useful to indicate or not a reoperation and, in case of need for surgical re-approach, there may be a more appropriate surgical planning since the risk of complications is higher in patients who have already been operated on, especially with regard to the ureter (21) and pelvic innervation.

In this context, the recording of the surgery (34) and the availability of the surgery video for the patient is a factor to be taken into consideration. In addition to being able to serve as an object of study to teach new surgeons, videos of the procedures allow for quality control of the surgery, reassessment of the surgical procedure in the event of complications (in order to reduce the rate of complications or even to consider the need for early reintervention) and better follow-up of the patient with endometriosis.

CONCLUSION

Endometriosis is a complex disease that has a multifocal pattern of distribution in pelvic and extrapelvic, genital and extragenital organs. Surgery is the most effective form of long-term treatment of the disease and must be performed according to the topography affected by endometriosis. Usually, multiple concomitant procedures must be performed, especially in cases of deep endometriosis. Correct coding of the procedure is crucial in order to have adequate control of the treatment provided to patients.

REFERÊNCIAS

- 1. Eskenazi B, Warner ML. Epidemiology of Endometriosis. Obstet Gynecol Clin North Am. 1997;24(2):235-58.
- 2. Gordts S, Koninckx P, Brosens I. Pathogenesis of deep endometriosis. Fertil Steril. 2017;108(6):872-85.
- 3. Ugwumadu L, Chakrabarti R, Williams-Brown E, Rendle J, Swift I, John B et al. The role of the multidisciplinary team in the management of deep infiltrating endometriosis. Gynecol Surg. 2017;14(1):15.
- 4. Bendifallah S, Roman H, Rubod C, Leguevaque P, Watrelot A, Bourdel N et al. Impact of hospital and surgeon case volume on morbidity in colorectal endometriosis management: a plea to define criteria for expert centers. Surg Endosc. 2018;32(4):2003-11.
- 5. Pope RJ, Abdelbadee AY, Armstrong AJ, Ganesh PR, Bedaiwy MA, Zanotti KM. Standardization of laparoscopic operative reporting: improving gynaecological surgeon communication. J Obstet Gynaecol Can. 2018;40(3):304-9.
- 6. Kondo W, Zomer MT, Pinto EP, Ribeiro R, Ribeiro MFC, Trippia CR et al. Deep infiltrating endometriosis: imaging features and laparoscopic correlation. Journal of Endometriosis. 2011;3(4):197-
- 7. Trippia CH, Zomer MT, Terazaki CRT, Martin RLS, Ribeiro R, Kondo W. Relevance of imaging examinations in the surgical planning of patients with bowel endometriosis. Clin Med Insights Reprod Health. 2016;10:1-8.
- 8. CID10 Codigo Internacional de Doencas. Available from: https:// www.cid10.com.br/
- 9. CBHPM 5ª edição Portal Saude Direta. Available from: http:// www.saudedireta.com.br/docsupload/1365298069cbhpm.pdf
- 10. Kondo W, Ribeiro R, Trippia C, Zomer MT. Deep infiltrating endometriosis: anatomical distribution and surgical treatment. Rev Bras Ginecol Obstet. 2012;34(6):278-84.

- 11. Kondo W, Kondo MTZ, Trippia CH, Ribeiro DMFR. Cirurgia da endometriose pleural, pulmonar e diafragmática. In: Sérgio Podgaec, Eduardo Schor, Paulo Ayroza Ribeiro, editors. Coleção FEBRASGO Endometriose. Rio de Janeiro: Guanabara Koogan; 2020. p.227-44.
- 12. Pontis A, D'Alterio MN, Pirarba S, de Angelis C, Tinelli R, Angioni S. Adenomyosis: a systematic review of medical treatment. Gynecol Endocrinol 2016;32(9):696-700.
- 13. Kondo W, Zomer MT, Branco AW, Stunitz LC, Branco Filho AJ, Nichele S. Surgical technique of total laparoscopic hysterectomy. Bras. J. Video-Sur. 2010; 3(3):139-49.
- 14. Smith AV, Cabrera R, Zomer MT, Trippia C, Kondo W. Surgical Uterine-Sparing Management of Adenomyosis: Techniques and Review of Literature. ARC Journal of Gynecology and Obstetrics. 2018;3(4):25-34.
- 15. Canis M, JL Pouly, S Tamburro, G Mage, A Wattiez, MA Bruhat. Ovarian response during IVF-embryo transfer cycles after laparoscopic ovarian cystectomy for endometriotic cysts of >3 cm in diameter. Hum Reprod. 2001;16(12):2583-6.
- 16. Kondo W, Bourdel N, Zomer MT, Slim K, Rabischong B, Pouly JL et al. Laparoscopic cystectomy for ovarian endometrioma - A simple stripping technique should not be used. Journal of Endometriosis. 2011;3(3):125-34.
- 17. Donnez J, Nisolle M, Gillet N, Smets M, Bassil S, Casanas-Roux F. Large ovarian endometriomas. Hum Reprod. 1996;11(3):641-6.
- 18. Sutton CJ, Ewen SP, Jacobs SA, Whitelaw NL. Laser laparoscopic surgery in the treatment of ovarian endometriomas. J Am Assoc Gynecol Laparosc. 1997;4(3):319-23.
- 19. Vignali M, Bianchi S, Candiani M, Spadaccini G, Oggioni G, Busacca M. Surgical treatment of deep endometriosis and risk of recurrence. J Minim Invasive Gynecol. 2005;12(6):508-13.
- 20. De Cicco, Nardone C, Terranova C, Plotti F, Ricciardi R et al. The

- role of ovarian fossa evaluation in patients with ovarian endometriosis. Arch Gynecol Obstet 2015;292(4):869-73.
- 21. Resende Jr JAD, Vieiralves RR. Endometriose Ureteral ureterólise e ressecção segmentar. In: Crispi CP, Vieira MA, editors. Técnicas e táticas cirúrgicas em ginecologia minimamente invasiva. Rio de janeiro: Thieme Revinter; 2019. P.83-93.
- 22. Kondo W, Bourdel N, Zomer MT, Slim K, Botchorishvili R, Rabischong B et al. Surgery for deep infiltrating endometriosis. Technique and rationale. Front Biosci (Elite Ed) 2013;5:316-32.
- 23. Kondo W, Branco AW, Branco Filho AJ, Stunitz LC, Neto SRN, Zomer MT. How do I treat the ureter in deep infiltrating endometriosis by laparoscopy? Bras J Video-Sur. 2011;4(4):181-97.
- 24. Kondo W, Branco AW, Trippia CH, Ribeiro R, Zomer MT. Retrocervical Deep Infiltrating Endometriotic Lesions Larger Than 30mm Are Associated With An Increased Rate Of Ureteral Involvement. J Minim Invasive Gynecol. 2013;20(1):100-3.
- 25. Kondo W, Bourdel N, Jardon K, Tamburro S, Cavoli D, Matsuzaki S et al. Comparison between standard and reverse laparoscopic techniques for rectovaginal endometriosis. Surg Endosc. 2011;25(8):2711-7.
- 26. Cabrera R, Tessmann Zomer M, Larrain D, Bourdel N, Canis M, Kondo W. Laparoscopic reverse technique for posterior rectovaginal deep endometriosis nodule step by step. J Minim Invasive Gynecol. 2020;27(3):577-8.
- 27. Kondo W, Ribeiro R, Trippia C, Zomer MT. Laparoscopic treatment of deep infiltrating endometriosis affecting the rectosig-

- moid colon: nodulectomy or segmental resection? Gynecol Obstetric. 2013;S3:001.
- 28. Bosev D, Nicoll LM, Bhagan L, Lemyre M, Payne CK, Gill H et al. Laparoscopic management of ureteral endometriosis: the Stanford University hospital experience with 96 consecutive cases. J Urol. 2009; 182(6):2748-52.
- 29. Gupta R, Singh AK, Farhat W, Ammar H, Azzaza M, Mizouni A et al. Appendicular endometriosis: a case report and review of literature. Int J Surg Case Rep. 2019;64:94-6.
- 30. Joseph J, Sahn SA. Thoracic endometriosis syndrome: new observations from an analysis of 110 cases. Am J Med. 1996;100(2):164-70.
- 31. Bobbio A, Canny E, Mansuet Lupo A, Lococo F, Legras A, Magdeleinat P et al. Thoracic endometriosis syndrome other than pneumothorax: clinical and pathological findings. Ann Thorac Surg. 2017;104(6):1865-71.
- 32. Nezhat C, Seidman DS, Nezhat F, Nezhat C. Laparoscopic surgical management of diaphragmatic endometriosis. Fertil Steril. 1998;69(6):1048-55.
- 33. Nezhat C, Main J, Paka C, Nezhat A, Beygui RE. Multidisciplinary treatment for thoracic and abdominopelvic endometriosis. JSLS. 2014;18(3): e2014.00312.
- 34. Kondo W, Zomer MT. Video recording the laparoscopic surgery for the treatment of endometriosis should be systematic! Gynecol Obstet (Sunnyvale). 2014;4:220.