Schauta's Operation: A Review of the Literature and Single-Center Case Series

Cirurgia de Schauta - Revisão da Literatura e Casuística do Serviço do HMIPV

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ABSTRACT

Great strides have been made in the field of vaginal surgery over the past decade. Radical vaginal surgery is gaining wide acceptance in the treatment of cervical cancer at many centers worldwide, due to its many advantages to patients (including faster recovery and fewer postoperative complications) and the health sector (including lower cost as compared to traditional abdominal surgery). Radical vaginal operations thus belong in the armamentarium of any gynecologic oncologist in current practice. The objective of this study was to demonstrate the efficacy of radical vaginal hysterectomy (Schauta's operation) versus Wertheim-Meigs hysterectomy for the treatment of cervical cancer through a review of the literature. We also present a case series of patients in whom the Schauta procedure was performed by the gynecologic oncology team at Hospital Materno Infantil Presidente Vargas, Porto Alegre, Brazil. We conclude that the Schauta-Amreich procedure (radical vaginal hysterectomy) is a valid option for treatment of early-stage cervical cancer, providing lower morbidity than the Wertheim-Meigs operation (radical abdominal hysterectomy) with non inferior survival rates.

Key words: Vaginal Hysterectomy. Cervical cancer. Laparoscopy.

INTRODUCTION

The renaissance of vaginal surgery has been followed by an expansion of its indications beyond classical ones such as uterine prolapse and fibroids to encompass gynecologic oncology as well.

Radical vaginal hysterectomy is currently a valid option for treatment of cervical cancer, as it is associated with fewer postoperative complications, shorter lengths of hospital stay and, consequently, lower cost, particularly the public health care settings.[1]

The advent of laparoscopy has made it possible to perform pelvic lymphadenectomy, which was previously performed using the Mitra technique (extraperitoneal pelvic lymphadenectomy). Both approaches provide an excellent method for disease staging, with the number of nodes sampled comparable to that of open dissection.[2]

Schauta's operation (radical vaginal hysterectomy) thus constitutes a good option for the treatment of cervical cancer, as it provides cost reductions, decreased operative time, earlier discharge, and a lower complication rate compared with the Wertheim/Meigs procedure (radical abdominal hysterectomy).[1]

LITERATURE REVIEW

Historical aspects

The use of radical vaginal hysterectomy in the treatment of neoplastic disease of the uterus was first proposed by Karl August Schuchardt in the late 18th century. On April 21, 1893, Schuchardt performed the first such procedure in a patient with cervical cancer, using the incisional approach to the vagina, perineum, and levator ani muscles that has borne his name since 1908, which allows opening of the apex of the vaginal fornix for complete resection of the parametria. Prior to his death from a surgical infection, Schuchardt had obtained - and demonstrated - highly

positive outcomes using the procedure, with unprecedented cure rates. Around the same time, Friedrich Schauta, a young Viennese gynecologist, took Schuchardt's ideas to the next level, perfecting the latter's approach even further and showing that survival rates after radical vaginal hysterectomy were dramatically superior to those obtained with simple vaginal hysterectomy. Twenty-five years would pass before the procedure found its next enthusiast in Walter Stoeckel, whose pupil — Isidor Amreich — provided a detailed description of the relevant surgical anatomy and developed the operation into a systematic anatomical procedure.

Despite early criticism due to the inability of lymphadenectomy with this approach, the Schauta-Amreich procedure was remarkably effective in the treatment of cervical cancer, and outcomes were noninferior to those obtained after abdominal surgery with pelvic lymphadenectomy.

In 1958, Mitra introduced a new technique to gynecologic practice: extraperitoneal pelvic lymphadenectomy. Indications for this procedure, which was devised as an adjunct to vaginal hysterectomy, were limited. The relatively challenging nature of vaginal surgery, which requires above-average dexterity and experience due to the constraints of the surgical field, curtailed wider use of the Mitra procedure, and cases of cervical cancer posing a high surgical risk or not providing adequate conditions for the vaginal approach were long treated with radiation alone.

In recent years, growing interest in improved prognostic assessment has favored surgical treatment at the expense of radiation therapy. The role of surgery, which was originally regarded as exclusively therapeutic, has shifted substantially; greater emphasis is now placed on its diagnostic aspects, in an attempt to integrate clinical staging with more precise anatomical assessment. If, on the one hand, this has opened the door to more individualized therapy with integrated treatment approaches, it has also led to issues concerning surgical treatment in patients whose constitution or comorbid conditions (including obesity, heart disease, and lung disease) places them at high operative and anesthetic risk. In this respect, the more favorable risk-benefit ratio of vaginal surgery (which includes shorter operative times, reduced surgical trauma, and the possibility of regional anesthesia) plays a crucial role in the management of these patients.

In 1993, Massi et al.,[1] of the University of Florence, Italy, published a landmark study that compared survival rates obtained after Schauta-Amreich and Wertheim/Meigs hysterectomy and found them to be similar. Recent advances in endoscopic surgery, with the development of laparoscopic lymphadenectomy, have led to renewed interest in the applicability of radical vaginal hysterectomy to gynecologic oncology.

The first Schauta operation carried out in Brazil was performed in 1932 in Rio de Janeiro, by José Alves Maurity Santos.

Indications
- Indications for Schauta's operation overlap with those of Wertheim/Meigs hysterectomy:
- Stage IA2, IB1, and IIA cervical tumors < 4.0 cm in size;
- Patients at high surgical risk, including those with obesity, diabetes mellitus, and chronic hypertension, among other conditions (a particular indication for the procedure);
- Young patients who request improved cosmesis.

Operative technique
The same preoperative care regimen employed in vaginal hysterectomy for the treatment of benign uterine conditions apply to the Schauta-Amreich radical vaginal hysterectomy.

The patient is placed in the lithotomy position with the legs suspended in high stirrups. Bladder catheterization may be transurethral or suprapubic; both are fine methods of ensuring that the bladder remains empty intraoperatively, although transurethral catheterization is currently preferred.

The catheter is kept in place after surgery to prevent bladder distension due to atony, which is a common consequence of this type of procedure.

- *Schuchardt incision and preparation of the left pararectal space*

The procedure begins with a mediolateral perineal incision on the patient's left side, through skin and vaginal mucosa and extending as high and deep as the perineal muscles and levator ani; this is known as the Schuchardt incision, and is preceded by infiltration of a vasoconstrictive solution compounded

by mixing a single vial of epinephrine in 200 to 300 mL of normal saline (Figure 1).

Major case series published in recent years no longer use the Schuchardt incision, as it is considered inordinately invasive and unnecessary when the performing surgeon is past the learning stage.

The left pararectal space is dissected and Breisky retractors are used to displace the rectum medially until the inferior border of the left cardinal ligament presents itself.

- *Cervical incision and preparation of the vaginal vault*

One of the advantages of radical vaginal hysterectomy is that it enables more precise demarcation of the amount of vaginal mucosa to be removed, guiding circular incision of the cervix according to tumor size, location, and extension. The anterior vaginal mucosa is pulled downward and incised perpendicularly all the way through with a scalpel. This incision must be performed above the anterior sulcus of the vagina, permitting dissection of enough vaginal tissue to invaginate the tumor.

The posterior vaginal mucosa is then pulled upward; a circular incision is performed with a scalpel and the tissue is dissected with scissors as in the anterior mucosa.

After the vaginal cuff has been created, the cervix is invaginated, enclosing the tumor, to prevent seeding of tumor cells and facilitate manipulation of the uterus (Figure 2).

The supravaginal septum is divided with scissors, the vesicouterine excavation is opened up, and the bladder is retracted cranially.

The same procedure is performed posteriorly, with displacement of the rectum, although the rectouterine pouch is not opened.

- *Opening of the paravesical space, dissection of the ureter and resection of the anterior parametrium*

The uterus is retracted downward and rightward by the first assistant while the border of the anterior mucosal incision is grasped by two Kocher clamps at the 1 and 3 o' clock positions. The left paravesical space is entered with scissors; the incision thus made is expanded bluntly with the operator's finger and a Breisky retractor is introduced. Traction on the retractors introduced into the vesicouterine excavation and left paravesical space distends the bladder pillar, which contains the ureter. The left ureter

Figure 1 - *Schuchardt incision and preparation of the left pararectal space.*

Figure 2 - *Cervical incision and preparation of the vaginal vault.*

can be palpated between two fingers, allowing the surgeon to determine exactly where the anterior parametrium is to be incised.

Three structures must be identified at this point: the ureter, the vascular bundle, and the dome of the bladder. The surgeon should know the exact location of the ureter, because the radical nature of the procedure is dependent upon how much of the anterior parametrium (vesicouterine ligament) is resected. The ureter can then be further dissected cranially to the level of the tunnel, where it crosses the cardinal ligament.

The uterine artery is located near a bend or elbow in the ureter, and should then be protected and displaced cranially with Breisky retractors.

The ureter and pedicle of the uterine artery are then retracted cranially, exposing the upper border of the cardinal ligament. The same procedure is repeated on the right side after development of the right pararectal space. Ureteral dissection allows safe resection of the cardinal ligaments (lateral parametria) (Figures 3 and 4).

▪ *Opening of the rectouterine pouch and resection of the posterior parametrium*

The uterus is retracted upward by an assistant and the posterior peritoneum is opened with scissors.

The next step is resection of the posterior parametrium, which requires broad dissection of the rectovaginal space, exposing the full extent of the uterosacral ligaments. A Breisky retractor is introduced into the peritoneal cavity to provide upward traction on the uterus, while another retractor is placed into the left pararectal space. Simultaneously, a forceps-held gauze swab is used to depress the lateral portion of the rectum, distending the left uterosacral ligament. The base of the ligament is clamped with a slightly curved Z-clamp, cut, and ligated.

The plane of resection of the posterior parametrium will depend on how radical the surgeon feels the procedure should be, according to preoperative clinical assessment. The same procedure is repeated contralaterally (Figure 5).

▪ *Opening of the anterior peritoneum and removal of the uterus and adnexae*

The peritoneum is opened and a Breisky retractor is introduced into the anterior portion of the rectouterine pouch. The index finger of the operator's left hand is advanced under the peritoneal leaf until it reaches the left round ligament, which is clamped, cut, and sutured; this brings the uterus further downward and broadens exposure of the suspensory ligament of the left ovary. The ovaries and Fallopian tubes are removed or preserved depending on patient age. The same procedure is repeated on the right, again resecting or preserving the adnexa as appropriate (Figure 6).

▪ *Resection of the cardinal ligament*

Adequate resection of the lateral parametrium away from the uterus and near the pelvic wall requires complete exposure of the surgical field with Breisky retractors and lateral traction on the uterus. One retractor is placed in the pararectal fossa while a wider one retracts
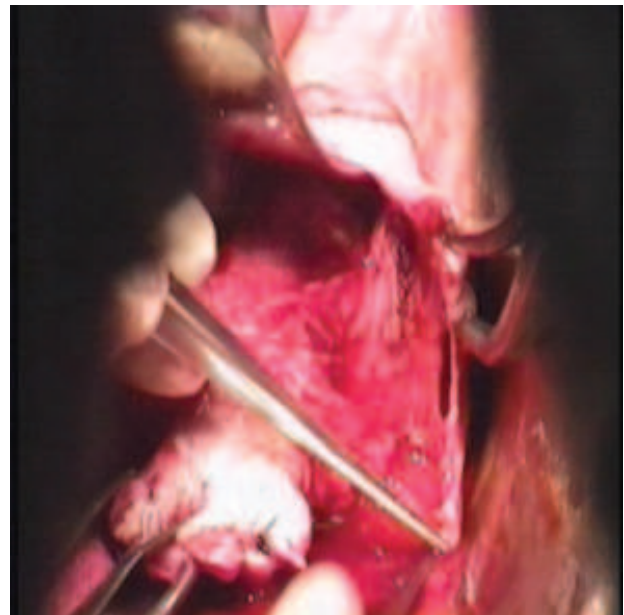

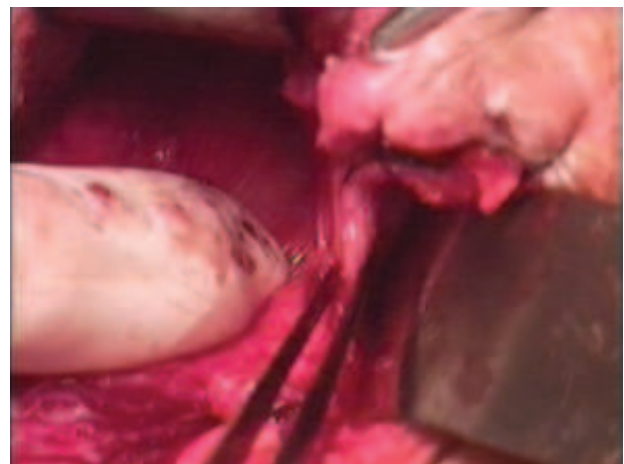*Figure 3 - Opening of the paravesical space.*

Figure 4 - Dissection of the ureter and resection of the anterior parametrium.
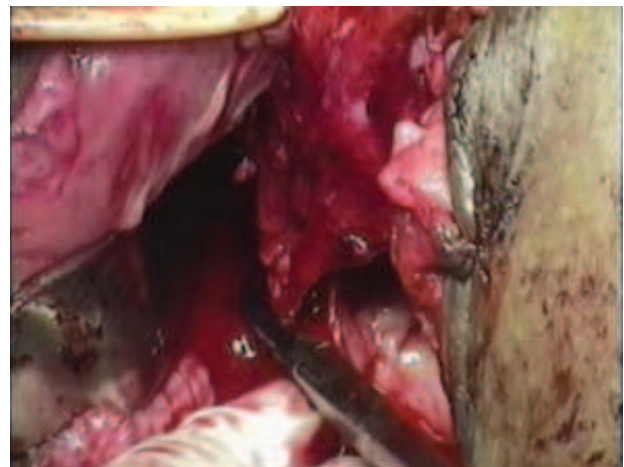

Figure 5 - Opening of the rectouterine pouch and resection of the posterior parametrium.

the bladder and ureter upward. The cardinal ligament and adjacent paravaginal tissues are clamped laterally with a strongly curved Z-clamp. The precise location of clamping in relation to the pelvic wall will depend on the desired radicality of the procedure.

Clamping, section, and suture of the right cardinal ligament follow the same sequence; the uterus will then usually develop through the introitus, attached solely to the suspensory (infundibulopelvic) ligament and the vessels it carries (Figure 7).

- *Closure of the vaginal dome and Schuchardt incision*

The vaginal dome is closed with slow-absorption sutures. Finally, the Schuchardt incision is closed in a layered fashion (levator ani muscles, subcutaneous tissue, vaginal mucosa and skin).

Classes of radical vaginal hysterectomy

The term "radical" hysterectomy is used to refer to any procedure in which the uterus is removed with its surrounding connective tissue, the anterior, posterior, and lateral parametria are resected, the uterine artery is ligated at its source, and the distal ureter is mobilized.

Broad excision of the parametria and extensive dissection of the distal ureter may lead to significant changes in bladder function. Current gynecologic oncology practice thus seeks to provide individualized treatment, tailored to each patient, to reduce the postoperative complication rate and preserve urinary function.

With this in mind, Piver et al.[3] proposed five classes of radical abdominal hysterectomy according to the amount of vaginal tissue and parametrium resected. Following their example, Massi et al.[1] later suggested three classes of radical vaginal hysterectomy, also according to the amount of vaginal tissue and parametrium removed, namely:

- *Vaginal hysterectomy (Class I)*

The parametria are dissected near the uterus. No ureteral dissection is performed.

Indications: recurrent cervical carcinoma in situ, unclear margins after conization/ LEEP, select cases of microinvasive carcinoma (stage IA1).

- *Schauta-Stoeckel operation (Class II)*

The initial stages are similar to those of the classical Schauta-Amreich operation (class III);
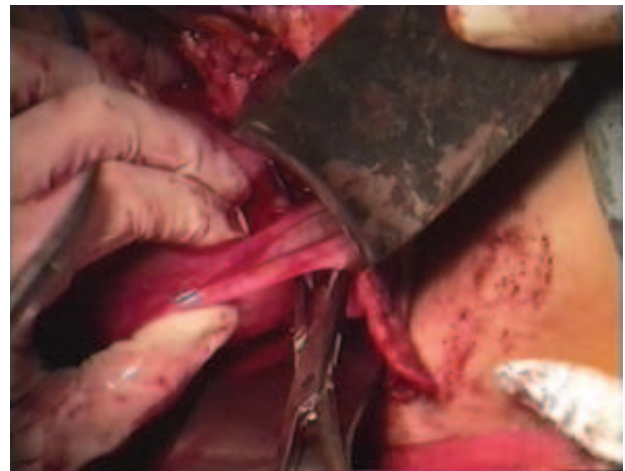

Figure 6 - *Opening of the anterior peritoneum and removal of the uterus and adnexae.*
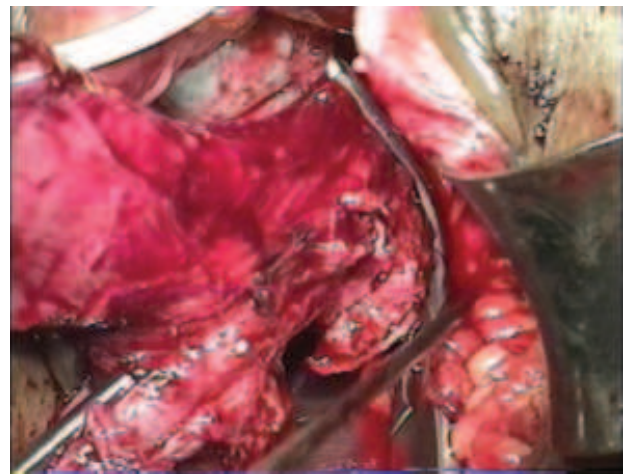

Figure 7 - *Resection of the cardinal ligament.*

however, the ureter is dissected not completely, but only far enough to enable ligation of the uterine artery a few centimeters from the uterus and rexection of the proximal portion of the anterior parametrium. The distal half of the posterior parametrium is left intact, whereas resection of the lateral parametrium is identical to that performed in class III surgery (near the pelvic wall).

Indications: invasive stage IA2 and IB cervical tumors < 2 cm in size.

- *Schauta-Amreich surgery (Class III)*

Detailed description provided above.

Indications: alternative to the Wertheim/ Meigs radical abdominal hysterectomy. Schauta's operation is chiefly indicated in obese or high-risk patients with stage IB or IIA cervical cancer. However, augmentation of this procedure with extraperitoneal or laparoscopic pelvic lymphadenectomy allows safe

expansion of these indications to include all operable cases of cervical cancer.[1,2,4,5]

Available options for lymphadenectomy (Mitra vs. laparoscopic)

Pelvic lymphadenectomy may be performed by various approaches: intraperitoneal abdominal (Wertheim/Meigs), extraperitoneal abdominal (Mitra), or laparoscopically. In 1993, Massi[1] proposed a modified version of the extraperitoneal lymphadenectomy procedure described by Mitra in 1959. This procedure seeks to accomplish complete dissection of all lymphatic tissues surrounding the common, external, and internal iliac vessels and the obturator fossa.

Adequate exposure of these areas is obtained via two oblique, 6- to 7-cm-long incisions made medially to the anterior superior iliac spines and above the inguinal ligament. After layered dissection, the surgeon locates the upper and lower boundaries of the external iliac vessels, the source of the internal iliac vessels, and the ureter (attached to the peritoneum). All lymph nodes in this region and at the level of the obturator fossa are resected.

In laparoscopic lymphadenectomy, the retroperitoneal approach is also required for resection of lymph nodes located near the aforementioned structures, but the layered opening essential to the Mitra procedure is by definition unnecessary. The advantages of laparoscopy include the possibility of inventorying the abdominal cavity, the absence of scars on the lower abdomen, the lower rate of surgical site complications, and lymph node sampling perfectly comparable to that accomplished with the Mitra procedure.

Furthermore, two of the main advantages of endoscopic techniques are their lower cost and current popularity, which improve the acceptability of extending their indications to staging and treatment of cervical cancer.

COMPLICATIONS

The mortality rate of radical vaginal hysterectomy ranges from 0.27% to 2.5%.[1,6] Morbidity is related to the underlying indication for the procedure, and includes urinary and bowel complications (injury, fistulas, and infection). The main urinary tract complication is dyskinesia (atony) of the bladder; all patients experience this adverse effect to some extent after radical vaginal surgery. The incidence of major

bladder dyskinesia may exceed 50%. Early signs include a hypertonic reaction with decreased bladder capacity, increased residuals, and loss of sensation of bladder fullness. Self-catheterization is essential, and must continue until symptoms resolve completely, which may take several months. Some patients will never regain preoperative bladder function. Ureteral dilation occurs in 87% of patients in the first postoperative week. In most cases, the dilation has resolved and ultrasonographic assessment of the urinary tract is within normal limits on the sixth postoperative week. Peristalsis along the distal ureter returns to normal within 1 month of the procedure.

The incidence of vesicovaginal, ureterovaginal, and rectovaginal fistula is 2.0%, 3.0%, and 0.7% respectively. Other complications include surgical site infection of the Schuchardt incision, dehiscence of the vaginal vault, and, on rare occasions, bowel evisceration.

Results

In patients with IB stage disease, 5-year survival after radical vaginal hysterectomy is comparable to that obtained after the Wertheim/Meigs procedure.[1,6,7] In a review of 1089 patients undergoing vaginal hysterectomy and 809 undergoing the abdominal version of the procedure, 5-year survival was 74.2% and 79.0% respectively. A more recent study by Massi[8] reported higher 5-year survival rates after the Schauta-Amreich operation (81% vs. 75% in stage IB disease, $p < 0.05$; 68% vs. 64% in stage IIA disease, $p > 0.05$). The results reported by these and other authors suggest that the radical vaginal hysterectomy approach described by Schauta and Amreich can play a role in the treatment of patients with operable cervical cancer.

Schauta vs. Wertheim in the published literature

Schwartz et al.[9] published the outcomes of radical vaginal hysterectomies performed via the Schauta-Amreich approach between 1959 and 1970: 234 surgeries; 5-year survival rate — overall, 84%; for tumors > 2.0 x 2.0 cm in size and 1.0 cm depth, 76%; for tumors smaller than the above dimensions, 91%; low morbidity and no perioperative mortality.

The authors conclude that the possibility of pelvic lymph node metastasis depends on the size of the primary tumor.

Massi et al.[1] compared the Schauta-Amreich vaginal hysterectomy and the Meigs

abdominal hysterectomy in the treatment of cervical cancer.

The objective of the study was to determine the effectiveness of Schauta's operation in the treatment of stage IB or IIA cervical cancer. The study was designed as a retrospective analysis of outcomes obtained with the Schauta vs. Meigs operations in 793 patients with stage IB or IIA disease, 201 of whom underwent adjuvant radiotherapy. A total of 356 patients with stage IB and 76 with stage IIA disease underwent Schauta's operation, whereat 288 and 64 patients with stage IB and IIA disease underwent Meigs' procedure respectively.

Results: 5-year survival, stage IB disease:
81% Schauta
75% Meigs
5-year survival, stage IIA disease:
68% Schauta
64% Meigs

The authors conclude that the Schauta radical vaginal hysterectomy is associated with high cure rates in stage IB or IIA cervical cancer and is a valid alternative to the Wertheim/Meigs procedure for this indication.

In 1996, Roy et al.[10] compared the safety, efficacy, and potential benefits of Schauta's operation versus the Wertheim/Meigs procedure in the treatment of early-stage cervical cancer:

- Of the 52 patients with cervical cancer, 25 underwent laparoscopic lymphadenectomy followed by Schauta's operation and 27 underwent the Meigs procedure;
- The mean number of lymph nodes was 27, and the only complication was injury to the external iliac vein, which was repaired after conversion to laparotomy;
- Patients in the Schauta and Wertheim/Meigs groups were comparable in terms of age, weight, parity, and tumor stage, histology, and size;
- Blood loss was lower in the Schauta group;
- Operative time was 270 min in the Schauta group and 280 min in the Meigs group;
- Blood transfusions were required by 4 patients in the Schauta group and 5 in the Meigs group;
- Length of postoperative stay was 7 days in both groups;

- Bladder perforation occurred in 2 patients in the Schauta group;
- Fever occurred in 4 Schauta and 9 Meigs patients;
- One preperitoneal abscess and one hematoma occurred in the Schauta group;
- One hematoma and 4 surgical site infections occurred in the Meigs group;
- Postsurgical ileus occurred in 1 Schauta and 4 Meigs patients;
- Mean length of follow-up was 27 months;
- The study concluded that the Schauta and Wertheim/Meigs operations are comparable, although the former produces no abdominal scarring and is associated with a lower incidence of fever.

Renaud et al.[11] reviewed 102 patients with early-stage cervical cancer who underwent laparoscopic pelvic lymphadenectomy followed by Schauta's operation. Mean patient age was 36 years (range, 25–68 years). Their results were as follows:

- Squamous cell carcinoma and adenocarcinoma occurred in 68% and 32% of patients respectively;
- Stage IB1 – 77%
- Stage IA1 – 1%
- Stage IA2 – 16%
- Stage IIA – 6%
- Mean operative time, 270 min;
- Mean number of lymph nodes resected, 27;
- Intraoperative complications of laparoscopy:
- Iliac vessel damage in 2 cases
- Epigastric vessel damage in 1 case
- Complications of Schauta's operation included bladder perforation and one conversion to laparotomy for control of hemorrhage;
- Postoperative complications occurred in 6% of patients, with only 1 case considered severe (abscess formation requiring incision and drainage);
- Tumors recurred in 4 patients.
- The authors conclude that the combination of laparoscopic and vaginal approaches provides a perfectly viable alternative for treatment of cervical cancer, with

remarkably low morbidity and complication rates and satisfactory lymph node sampling.

Angioli et al.[12] conclude that Schauta's operation provides significant advantages over the Wertheim/Meigs procedure, including: the possibility of performing it under regional anesthesia, particularly in patients with unfavorable clinical profiles; reduced surgical trauma due to the absence of abdominal incision; applicability in obese patients; reduced operative time; need for fewer blood transfusions; lower risk of complications; faster postoperative recovery; and shorter lengths of hospital stay.

The main disadvantage of Schauta's operation is the lack of pelvic lymph node dissection; however, this has changed with the advent of laparoscopic lymphadenectomy.

CASE SERIES

We now present a series of patients with a diagnosis of early-stage cervical cancer and indications for Schauta's operation with laparoscopic or Mitra pelvic lymphadenectomy who underwent the procedure at the Pelvic Oncology Service of Hospital Materno Infantil Presidente Vargas, Porto Alegre, Brazil.

Cases were initially limited to a tumor size < 2.0 cm, but as the learning curve progressed, application of the technique to tumors < 4.0 cm in size — a size often described in the literature as the boundary between indication of surgical therapy or radiation/ chemotherapy — became possible.

Table 1 provides a detailed description of the profile of these patients with relevant data for comparison with the current literature.

Table 1 - *Characteristics of patients who underwent Schauta's operation.*

Patient	Age	Stage	Histology	# nodes	Complications	Follow-up	LND
RO	33	IA1	SCC	3	No	13mo	Lap
EPZ	40	IB1	SCC	22	No	11mo	Mitra
MA	34	IB1	SCC	17	No	14mo	Mitra
MRC	33	IA2	SCC	12	No	41mo	Mitra
DFV	44	IB1	SCC	26	No	22mo	Mitra
JHF	31	IB1	AC	22	No	22mo	Mitra
VNR	56	IB1	SCC	21	No	18mo	Mitra
MD	42	IB1	AC	21	No	10mo	Mitra
CCG	37	IB1	SCC	30	No	3mo	Lap
DFS	66	IA2	SCC	18	No	8mo	Mitra
VR	54	IB1	SCC	21	No	41mo	Mitra
IMS	50	IB1	SCC	20	No	24mo	Mitra
FMC	44	IB1	SCC	11	Yes	25mo	Mitra
AS	39	IB1	SCC	18	Yes	24mo	Mitra
MÊS	62	IB1	AC	17	No	18mo	Lap
VM	36	IB1	SCC	14	No	16mo	Mitra
CSA	43	IB1	SCC	23	No	7mo	Mitra
ICR	41	IB1	AC	22	No	17mo	Mitra
PMN	34	IB1	AC	20	No	11mo	Lap
CLSS	58	IIA	AC	20	Yes	13mo	Mitra
MAS	62	IIA	SCC	20	Yes	20mo	Mitra
JCM	68	IIA	SCC	22	No	13mo	Mitra
MP	56	IIA	AC	23	No	11mo	Mitra
SAS	57	IB1	SCC	19	No	13mo	Mitra
AR	38	IB1	SCC	24	Yes	15mo	Mitra
JBG	55	IB1	SCC	22	No	6mo	Mitra

AC, adenocarcinoma; LND, lymph node dissection; SCC, squamous cell carcinoma.

RESULTS

- ***26 patients*** underwent the Schauta procedure
- ***Mean patient age*** was 46.6 years
- ***Histologic subtype***: Squamous cell carcinoma, 19 cases

Adenocarcinoma, 7 cases

- ***Staging***:   IA1, 1 case
- IA2, 2 cases
- IB1, 18 cases
- IIA, 4 cases
- According to anatomic pathology reports, ***clear margins*** were achieved in all patients.
- The mean ***number of lymph nodes*** was 20.
- Two patients had ***lymph node involvement*** and were referred to radiation therapy.
- Mean duration of ***follow-up*** was 17 months.
- No patients had tumor ***recurrence***.
- ***Complications*** included four cases of *atonic bladder*, with a mean duration of

28 days. Management was conservative, and consisted of intermittent self-catheterization until the post-void residual was approximately 50 mL or the patient could void spontaneously.

- Four patients developed *urinary tract infections*, which became recurrent in one. Antibiotic therapy was provided in both cases.

CONCLUSION

Vaginal surgery has undergone modifications that currently enable its satisfactory use in treatment of conditions such as cervical cancer, with survival rates comparable to those of abdominal surgery.

Schauta's operation has returned to challenge the dominance of conventional hysterectomy approaches. The radical nature of the procedure is preserved and is comparable to that of the Wertheim/Meigs operation.

Future prospects for use of this treatment will require development of new guidelines and precise indications for the Schauta procedure, as well as trained and experience surgeons, in the search for better outcomes and wider adoption of this technique.

RESUMO

A cirurgia vaginal como um todo alcançou avanços importantes na última década, A cirurgia vaginal radical para tratar câncer de colo uterino vem conquistando lugar de destaque em muitos centros mundiais por se tratar de uma cirurgia minimamente invasiva com benefícios evidentes para a paciente como rápida recuperação, menos complicações pos operatórias e benefícios para as instituições de saúde como baixo custo em relação a cirurgia abdominal radical clássica. Por isso, atualmente, esta técnica operatória deve ser incluída no arsenal dos procedimentos de todo o ginecologista oncológico. O objetivo deste trabalho consiste em demonstrar a eficácia da cirurgia vaginal radical como tratamento para carcinoma de colo uterino, em comparação à técnica de Wertheim-Meigs, através de uma revisão da literatura. Apresentamos também a casuística de pacientes operadas no serviço de oncologia ginecológica do Hospital Materno Infantil PresidenteVargas de Porto Alegre. Concluimos que a técnica de cirurgia de schauta-Amreich (histerectomia radical vaginal) constitui uma alternativa válida para o tratamento do câncer de colo uterino inicial com menos morbidade para a paciente em relação a clássica cirurgia de Wertheim-Meigs (histerectomia radical abdominal) e com os mesmos resultados na sobrevida destes pacientes.

Palavras chave: Histerectomia vaginal. Câncer Cervical. Laparoscopia.

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