

Recent literature with comments

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Tubal reanastomosis procedure still offers a realistic chance to pregnancy in the age group of over 40 years

**Gordts S, Campo R, Puttemans P, Gordts S,
Clinical factors determining pregnancy outcome
after microsurgical tubal reanastomosis. Fertil Steril
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Objective. To evaluate pregnancy rates after tubal microsurgical anastomosis.

Methods. A retrospective study of two hundred sixty-one women undergoing tubal microsurgical anastomosis. Tubal anastomoses were performed by minilaparotomy using microsurgical principles and approximating proximal and distal tubal ends in a two-layer technique with 8-0 ethylon. Pregnancy outcome was analyzed for the technique of sterilization, location of anastomosis, tubal length, age, and semen parameters.

Results. After exclusion of 89 patients lost to follow-up (34%) and 8 who did not attempt to conceive, 164 of the 261 patients were analyzed. The overall intrauterine pregnancy rate was 72.5%, with a miscarriage rate of 18% and a tubal pregnancy rate of 7.7%. Related to age, the cumulative intrauterine pregnancy rate was, respectively, 81%, 67%, 50%, and 12.5% for patients <36, 36–40, 40–43, and >43 years. Mean time to pregnancy was respectively 6.9, 6.2, and 12.7 months, respectively, for patients aged <36, 36–39, and 40–43 years. According to the type of sterilization, intrauterine pregnancies occurred in 72% after ring sterilization, 78% after clip sterilization, 68% after coagulation, and 67% after Pomeroy sterilization. Intrauterine pregnancies and ectopic pregnancies, respectively, occurred in 80% and 3.4% in the isthmo-isthmic, 63% and 18% in the isthmo-ampullar, 75% and 8.3% in the isthmo-cornual, 100% and 0% in the ampullo-ampullar, and 60% and 0% in the ampullo-cornual anastomosis groups.

Tubal length after anastomosis did not influence the pregnancy rate. In case of fertile sperm, the pregnancy rate was found to be 80%, and it decreased to 50% in case of subfertile semen.

Conclusion. Our results clearly demonstrate the validity of tubal microsurgical anastomosis, establishing a quasi normalization of the fertility potential and offering the opportunity for a spontaneous conception.

COMMENTARY

The authors present the results of microsurgical sterilisation reversal minilaparotomy procedures by the same gynaecologist over a period of 20 years. The cumulative pregnancy rate belongs among the highest from published data on this topic. The presentation in Kaplan Meier graphics is well chosen and provides the reader visualisation of time to pregnancy after surgery.

This retrospective study confirms earlier findings that age is a main factor in the success of sterilisation reversal. Interestingly the tubal reanastomosis procedure still offers a realistic chance to pregnancy in the age group of over 40 years.

To my opinion we have to interpret the results of this type of studies in two ways. The cumulative intra-uterine pregnancy rate expresses the quality of the technical performance and could be used as an indicator in that respect. The cumulative live birth rate in relation to age is the most relevant in counselling women on their wish to get a child by having a sterilisation reversal operation performed.

The study has a loss to follow-up of 34% which is high and prevents conclusions from subgroup analysis on site of anastomosis or remaining tubal length. Excellent technical skill is mentioned as a limiting factor to a successful spread of the laparoscopic approach. The authors conclusion that

tubal microsurgical anastomosis by minilaparotomy should be the reference technique can not be based on the present study as all surgery had been performed by the same, apparently highly skilled, gynaecologist. The authors did not define what they consider 'mini' as they refer to minilaparotomy in the study which would be informative to the reader.

From personal experience I would keep the debate open on the superiority of the multiple microsutures to obtain the best results. Our recent, yet unpublished, evaluation of 134 laparoscopic tubal sterilisation reversal procedures without the use of sutures but instead a tubal stent, seromuscular micro clip fixation and biological glue, shows comparable results to the present study as to age related cumulative pregnancy and live birth rate. The authors have contributed by their careful evaluation of their work to substantiate the tubal reanastomosis operation as a valuable option to women with regret after sterilisation. The outcome points to a firm place of the reanastomosis for women over 40 years as an alternative to IVF. This should be a topic worth investigate in a well designed new study I recommend this article to all readers working in the field of fertility for the interesting findings as well for the nice presentation of the results.

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The authors pioneered the use of the daVinci-system in gynaecologic oncology

Boggess JF, Gehrig PA, Cantrell L, Shafer A, Ridgway M, Skinner EN, Fowler WC.

A comparative study of 3 surgical methods for hysterectomy with staging for endometrial cancer: robotic assistance, laparoscopy, laparotomy. Am J Obstet Gynecol 2008; 360.e1-9

Objective. The purpose of this study was to compare outcomes in women who underwent endometrial cancer staging by different surgical techniques.

Methods. Three hundred twenty-two women underwent endometrial cancer staging: 138 by laparotomy (TAH); 81 by laparoscopy (TLH) and 103 by robotic technique (TRH).

Results. The TRH cohort had a higher body mass index than the TLH cohort ($P=.0008$). Lymph node yield was highest for TRH ($P<.0001$); hospital stay ($P<.0001$) and estimated blood loss ($P<.0001$) were lowest for this cohort. Operative time was longest for TLH (213.4 min) followed by TRH (191.2 min) and TAH (146.5 min; $P<.0001$). Postoperative complication rates were lower for TRH, compared with TAH (5.9% vs 29.7%; $P<.0001$). Conversion rates for the robotic and laparoscopic groups were similar.

Conclusion. TRH with staging is feasible and preferable over TAH and may be preferable over TLH in women with endometrial cancer. Further study is necessary to determine long-term oncologic outcomes.

COMMENTARY

The introduction of endoscopic techniques in gynaecological oncology is a recent development, which has not yet been fully evaluated. The availability of robotic assistance has certainly boosted this introduction, as it allows complex surgery, required in the treatment of cancer. In the 10 years that have passed since the only currently available laparoscopic robot has been introduced in clinical practice, there has been a slow, but steady increase in the number of robot assisted gynaecologic oncological operations. Until 2 years ago, publications on this subject, specifically in this field, were scarce. The last years, if not months, have shown an exponential increase in publications. This is a strong indication that this new surgical approach will soon be widely adopted.

Boggess et al. have strongly contributed to our understanding of the pros and cons of robot assisted laparoscopic treatment of gynaecologic malignancies. In this report on endometrial cancer an update is given on their experience with 103 cases. It constitutes the largest published series of the robotic assisted approach to endometrial cancer staging. The procedure studied involves hysterectomy, bilateral salpingo-oophorectomy, pelvic and (lower) peri-aortic lymph node dissection.

The admitted weakness of the study lies in its use of historic cohorts as controls. This reflects the way in which new surgical techniques are often introduced. However, better founded evidence for superiority of one technique over the other can only be obtained by a randomised approach. Methodologically this study is slightly hampered by a difference in time-frame between the techniques compared (2005–2007 vs. 2000–2004) and different (teams of) surgeons.

Dr Boggess has pioneered the use of the daVinci-system in gynaecologic oncology and his team was well able to perform a full staging procedure, including lymph node dissection. Valuable practical information on the best troicart placement and surgical technique is provided. In addition, they were able to perform a periaortic lymphadenectomy at least to the level of the inferior mesenteric artery with a single docking position. In the hands of this experienced team the number of lymph nodes removed, often used as a surrogate marker for surgical quality, is highest in the robot group (20.5) and almost double the number of nodes removed by laparotomy. However, the surgical teams for both approaches were different, and individual differences could have biased this outcome. Hospital stay is similar between the laparoscopic and robotic approaches, but

3 days shorter than laparotomy cases, a real benefit to the patient. Data on blood loss also favours the robotic approach but a difference of 71.3 ml with laparoscopy and 191.5 ml with laparotomy is not of clinical importance unless the required blood transfusions or cases of severe blood loss differ between the groups studied. Unfortunately this information is not available.

Smaller recent series have also compared robot assisted laparoscopy, conventional laparoscopy and laparotomy in the treatment for endometrial cancer, with similar results. (1, 2)

This study illustrates and confirms the theoretical benefits of the daVinci robotic system: Three dimensional view, wrist-like motions of instruments and lack of fulcrum effect. Full staging for endometrial cancer in experienced hands is safe and appears to be of good surgical quality. The advantages for the patient compared to laparotomy are obvious but compared to traditional laparoscopy the differences that are statistically significant may be of less clinical significance for endometrial cancer staging.

This article is a “must read” for all those gynaecological oncologist treating endometrial cancer patients as more and more patient will demand information on minimally invasive approaches in oncology. The article provides data, but also several important clinical tips as well as a comprehensive overview of the other available studies.

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More research is needed

Meuleman C, Vandenabeele B, Fieuws S, Spiessens C, Timmerman D and D’Hooghe T

High prevalence of endometriosis in infertile women with normal ovulation and normospermic partners. *Fertil Steril* 2008;—.

Objective. To determine the prevalence of histologically proven endometriosis in a subset of infertile women.

Methods. Retrospective case series with electronic file search and multivariable logistic regression analysis. Two hundred twenty-one infertile women without previous surgical diagnosis for infertility with regular cycles (variation, 21–35 days) whose partners have a normal semen analysis. Interventions included diagnostic laparoscopy and, if necessary, operative laparoscopy with CO2 laser excision. The outcome measurements were the prevalence of endometriosis and of fertility—reducing nonendometriotic tubal and/or uterine pathology.

Results. The prevalence of endometriosis was 47% (104/221), including stage I (39%, 41/104), stage II (24%, 25/104), stage III (14%, 15/104), and stage IV (23%, 23/104) endometriosis, and was comparable in patients with (54%, 61/113) and without (40%, 43/108) pelvic pain. The prevalence of fertility-reducing nonendometriotic tubal and/or uterine pathology was 29% in all patients (15% in women with and 40% in women without endometriosis). A multivariate logistic regression model including pain, ultrasound data, age, duration of infertility, and type of fertility was not or not sufficiently reliable for the prediction of endometriosis according to the revised American Fertility Society (rAFS) classifications I–II and rAFS III–IV, respectively.

Conclusion. Reproductive surgery is indicated in infertile women belonging to the study population, regardless of pain symptoms or transvaginal ultrasound results, since half of them have endometriosis and 40% of those without endometriosis have fertility-reducing pelvic pathology.

COMMENTARY

Meuleman and coworkers describe the results of a retrospective case series based on an electronic search of patient files at the LUFU Department of Obstetrics and Gynecology of the University Hospital Leuven, Belgium. Women with a subfertility of at least 1 year duration, with an ovulatory cycle and no male factor were selected. In these women an early laparoscopy and hysteroscopy was performed in order to diagnose and treat endometriosis and other factors that could impede fertility.

The article must be considered as recommended to read. The routine use of a diagnostic laparoscopy for the evaluation of all cases of female infertility is currently under debate (1). Let me focus here on the value of diagnosing and treating minimal and mild endometriosis in an early stage of the subfertility work-up in order to increase the likelihood to become pregnant. Laparoscopic treatment of minimal and mild endometriosis has been shown to be effective in improving pregnancy rates (2). However, the fecundity in the treated group could not be normalized. The fecundity was double from the one in the

diagnostic laparoscopy only group, but remained far below normal (6 versus 20%). This questions the strength of the recommendation to perform a laparoscopy in this patient group and the practical implication of such a recommendation. Moreover, many women with minimal and mild endometriosis will conceive in time, either spontaneously or after intra-uterine insemination in mildly stimulated cycles. The prevalence of endometriosis in the Meuleman study was 47%, which is in complete concordance with other studies. In a consecutive series of laparoscopies endometriosis was found to be present in 50%, 44% and 43 % in women with subfertility, chronic pelvic pain and asymptomatic women, up to 80% of these women having minimal to mild disease (3). This underscores the contention that early endometriosis is not a disease but a physiological phenomenon. Interestingly this philosophy has been previously advocated by two of the authors of the present paper (4). Taking this one step further, one should question the necessity to diagnose and treat a possibly physiological phenomenon that has a doubtful role in the aetiology of subfertility.

Another point of interest is the use of an early laparoscopy in order to detect and possibly treat tubal disease. I am wondering why the Leuven group is a non-believer when it comes to the value of history taking or the use of serum markers for Chlamydia infections in predicting which patients are a candidate for laparoscopy in order to diagnose tubal disease. Two easy to use decision rules that can accurately express a woman's probability of tubal pathology at the couple's first consultation have been documented (5). Besides that Chlamydia Antibody Testing (CAT) has been proposed as first screening test for tubal factor subfertility. In CAT-negative women, HSG may be performed because of its high specificity and fertility-enhancing effect. In CAT-positive women, hs-CRP seems promising, whereas HSG has no additional value (6).

In conclusion, the position and timing of laparoscopy indeed deserves critical reappraisal. Considering the above mentioned remarks I do fully agree with the concluding statement of the authors that "More research is needed to find out whether these findings can be expanded to other fertility centres".

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Endometriosis of the bowel can be a self-limiting disease

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Short-term outcome of fertility-sparing laparoscopic excision of deeply infiltrating pelvic endometriosis performed in a tertiary referral center. *Fertil Steril* 2008;—

Objective. To examine the short-term surgical outcomes in women undergoing fertility-sparing laparoscopic excision of deeply infiltrating pelvic endometriosis.

Methods. Retrospective cohort study. A total of 177 women who underwent fertility-sparing laparoscopic excision of deeply infiltrating endometriosis between January 1, 2006, and December 31, 2007. Eligible women were identified from the surgeons' database, and their medical notes were reviewed. Data from preoperative assessment, surgery, and postoperative outcomes were analyzed.

Results. One hundred seventy-seven women underwent fertility-sparing laparoscopic excision of deeply infiltrating endometriosis including excision of uterosacral ligaments (43, 24.3%), excision of rectovaginal septum (56, 31.6%), rectal shave (56, 31.6%), disk excision (7, 4%) or bowel resection (15, 8.5%). The median operative time was 95 min with a range of 30 to 270 min (interquartile range 75–120 min). Overall, complications developed in 18 women (10.2%). In 12 (6.8%) of these only uncomplicated pyrexia developed whereas significant intraoperative and/or postoperative complications developed in the remaining 6 (3.4%). Women spent a median of 2 days recovering in hospital (range 1–7, interquartile range 2–3 days).

Conclusion. Fertility-sparing laparoscopic excision of deeply infiltrating endometriosis appears to be safe with a low short-term complication rate.

COMMENTARY

This article is an analysis of the rate of complications among 177 women who underwent fertility-sparing laparoscopic surgery for deeply infiltrating pelvic endometriosis. The patients underwent a variety of types of surgery at a tertiary referral center where teams led by gynecologists may also have involved colorectal and urological surgeons. Conversion to laparotomy occurred in only one patient and the overall complication rate was 10.2% with a total of 24 complications developing in 18 women. These consisted of pyrexia, ileus, pelvic collection, wound infection, intraoperative bladder injury and hemorrhage. Excluding pyrexia, the complication rate was 3.4%.

The authors' complication rate is indeed very low. This is somewhat lower than expected in comparison with our experience, which is quite extensive. We began reporting treatment of bowel endometriosis via laparoscopy in 1989 (1) and have published extensively since that time. These included successful laparoscopic disc excision for infiltrating endometriosis of the bowel (2) as well as laparoscopic bowel resection (3–6). This includes the first use of subsequently popularized techniques of 'natural orifice surgery,' a term used to describe resection accomplished through the vagina and rectum, which the authors Dr. Pandis and colleagues used.

As the authors suggest, the complication rate does indeed increase when surgery occurs at a referral center such as ours which sees patients with very severe disease. It is this higher complication rate in severely affected patients, reflected in our work (2–4, 6), which has led us to adopt a more conservative approach (7) (ie laparoscopic shaving or disc excision) over more aggressive surgical therapy (segmental resection) in appropriately selected patients who seek to maintain or achieve fertility.

We believe that complete resection of all endometriotic bowel lesions may prevent local recurrence and the need for subsequent surgery. However, except in cases of severe stricture of the lumen of the bowel, our current practice is to defer bowel resection until after childbearing is completed. We thereby hope to avoid the potential for significant adhesion formation as well as other serious sequelae including long-term gastrointestinal and genitourinary symptoms as a result of interruption of parasympathetic networks damaged during significant dissection. Therefore, we believe that in patients in whom *achieving or restoring fertility is initially more important than pain relief*, a near-term, more conservative laparoendoscopic shaving or disc excision of bowel lesions may be performed with the understanding that re-operation may be needed for more extensive resection.

In our experience, we have found that endometriosis of the bowel can be a self-limiting disease. In fact, by

deferring aggressive surgery for endometriosis of the bowel until after pregnancy, we have often found significant improvement or complete resolution of disease at second-look laparoscopy. This is true even in the most severe cases where minor degrees of stricture have been previously diagnosed.

Nevertheless, this article represents an important confirmation that surgical therapy for deeply infiltrating pelvic endometriosis is feasible and should be attempted by qualified surgeons in appropriately chosen patients and that resection of bowel should be reserved for patients with severe stricture (8). Therefore I would rate it as 'Recommended' and would encourage readers to seek out the references I have included below.

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The therapeutic approach should be “problem-oriented” and not “lesion-oriented”

Vercellini P, Somigliana E, Vigano P, Abbiati A, Barbara G and Crosignani PG

Surgery for endometriosis-associated infertility: a pragmatic approach. Hum Reprod 2009;24:254–269.

Objective. Laparoscopic treatment for endometriosis-associated infertility is gaining widespread popularity supported mostly by uncontrolled studies, but the purported benefit of surgery may be overvalued.

Methods. We have therefore analysed the best available evidence with the aim of defining an approximate estimate of the effect size of conservative surgery for infertile women with endometriosis in various clinical conditions.

Results. The overall increase in post-operative likelihood of conception over background pregnancy rate may be estimated to be between 10 and 25%. The effect of surgery for peritoneal lesions is limited, and an estimate of benefit should be decreased by the fact that preoperative identification of the subjects actually with the condition is unfeasible. The benefit of excision of ovarian endometriomas is difficult to define due to multiple confounding factors and methodological drawbacks in the considered studies. Excision of rectovaginal endometriosis is of doubtful value and associated with worrying morbidity. The role of surgery before, after or as an alternative to IVF needs clarification.

Conclusion, the absolute benefit increase of surgery for endometriosis-associated infertility appears smaller than previously believed. Complete and detailed information on risks and benefits of treatment alternatives must be offered to infertile patients to allow unbiased choices between possible options.

COMMENTARY

Vercellini and co-workers have analyzed the available evidence in the surgical treatment of endometriosis in infertile patients. This is an important contribution in the literature that deserves several comments. First, the authors clearly state that an infertile woman with endometriosis constitutes a paradigmatic situation in which the therapeutic approach should be “problem-oriented” and not “lesion-oriented”. Thus, before recommending a surgical treatment, associated with complications more frequently than reported, one should be reasonably confident that the chances of success in terms of pregnancy are substantially increased. In this context, the authors analyze several theoretical clinical situations and make their recommendations based on the available literature with a critical view to the quality of the published studies.

The first point is whether laparoscopy should be employed for the diagnosis of endometriosis, provided that ultrasound is accurate enough for endometriomas. Thus, laparoscopy would be used to identify minimal to mild lesions and may not be cost-effective in couples undergoing IVF. In favour of a diagnostic laparoscopy in the infertility work-up is that it enables effective treatment at the same time. However, when

the authors analyze the second frequent situation, such as the presence of peritoneal disease (ASRM stage I–II), surgery does not seem to be justified because meta-analyses have not shown a significant improvement in pregnancy rates.

Then, Vercellini et al. studied the data that may substantiate surgery in case of ovarian disease (ASRM stage III–IV). Herein, the authors have found indirect proofs of an effect of surgery for endometriomas. Conservative surgery should be employed and excision of the cystic wall is a better option than vaporization/coagulation because the rate of recurrence is lower.

In case of deep endometriosis with rectovaginal lesions, the available evidence suggest that performing radical surgery instead of conservative and partial resection of the lesions is associated with longer time to recurrence of lesions and symptoms, but there is no improvement in time-to-conception or pregnancy rates. Thus, provided that this is a difficult surgery commonly associated with serious complications, the patients should be properly advised.

How to manage recurrent endometriosis? There are not sufficient data to counsel our patients and this is why other alternatives, such as ultrasound-guided cyst aspiration, have gained acceptance. Should we offer than immediately IVF? The answer is not clear unless the cyst is >4 cm in which surgery or aspiration are preferred. If not, the benefits and costs of both alternatives should be clearly explained to the couple. If the patient will undergo IVF, the question is whether the endometriosis should be operated to improve outcome. The data available suggest that this is not necessary.

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The advantages of using laparoscopy for hysterectomy procedures

Donnez O, Jadoul P, Squifflet J, Donnez J

A series of 3190 laparoscopic hysterectomies for benign disease from 1990 to 2006: Evaluation of complications compared with vaginal and abdominal procedures. BJOG 2009;116: 492–500

Objective: The aim of this study was to evaluate the complication rate after laparoscopic total hysterectomy and laparoscopic subtotal hysterectomy (LASH) in case of benign disease.

Design: All complications were prospectively recorded at the time of surgery and analysed retrospectively. Setting: University hospital. Population: Among 4505 hysterectomies performed by the same team using the same techniques between 1990 and 2006, 3190 were performed by laparoscopy, 906 by the vaginal route and 409 by laparotomy.

Methods: Laparoscopic hysterectomies, defined as laparoscopic subtotal hysterectomy (LASH) and total laparoscopic hysterectomy [laparoscopy-assisted vaginal hysterectomy (LAVH) switched to total laparoscopic hysterectomy (TLH) in 2000], were compared with vaginal and abdominal hysterectomies.

Results: Since the early 1990s, the number of laparoscopic procedures has continued to grow, while the number of abdominal and vaginal procedures has decreased. Both minor complications (fever $>38.5^{\circ}\text{C}$ after 2 days, bladder incision of <2 cm and iatrogenic adenomyosis) and major complications (haemorrhage, vesicoperitoneal fistula, ureteral injury, rectal perforation or fistula) have been observed during the surgical procedure itself and postoperatively. In the LASH group ($n=1613$), the minor complication rate was 0.99% ($n=16$) and the major complication rate 0.37% ($n=6$). In the total laparoscopic hysterectomy (LAVH/TLH) group ($n=1577$), the minor complication rate was 1.14% ($n=18$) and the major complication rate 0.51% ($n=8$). In the vaginal hysterectomy group ($n=906$), minor and major complication rates were 0.77% ($n=7$) and 0.33% ($n=3$), respectively. In the abdominal hysterectomy group ($n=409$), minor and major complication rates were 0.73% ($n=3$) and 0.49% ($n=2$), respectively.

Conclusion: The results from our series of 4505 women clearly show that, in experienced hands, laparoscopic hysterectomy is not associated with any increase in major complication rates. © 2008 The Authors.

COMMENTARY

This study by Donnez et al. aims at evaluating the complication rate after laparoscopic total hysterectomy (TLH), laparoscopic and vaginal hysterectomy (LAVH) and laparoscopic subtotal hysterectomy (LASH) in benign disease. Out of 4505 procedures, 3190 (70.8%) were laparoscopic, 906 (20.1%) were vaginal and 409 (9.1%) were carried out by laparotomy.

This paper deserves to be read as it includes a large series with homogeneous management of these indications.

In the laparoscopic hysterectomy group (LAVH/TLH), Donnez observed a 1.59% overall rate of complications compared to 1.36% in the LASH group. These rates are lower than those found in certain studies^{1,2} and give rise to two comments:

- the complication rate is directly related to the team's experience, and above all to the proportion of procedures carried out by laparoscopy: more than 70% in this study, while the uterine volume limit, beyond which another approach was chosen, was relatively large (equivalent to 16–17 weeks of gestation).

- these studies, in particular the Cochrane Review¹ (urinary tract injuries in laparoscopic vs. abdominal hysterectomy: OR=2.61, 95% CI 1.22–5.60) and the eVALuate study² published by Garry et al. in 2004, found a major complication rate of 11.1%. The latter study compared two parallel randomised trials that included 1380 women and evaluated the effects of laparoscopic hysterectomy compared with abdominal and vaginal hysterectomy. The high complication rate observed in this multicenter can be explained by differences in management of this procedure study and by the small number of cases treated by each gynaecologist.

In a comparative analysis³ of 1647 cases by Wattiez in 2002, a learning curve exceeding 21 cases was considered necessary.

The results of this single-centre study are in accordance with those of other single-centre studies^{4,5,6} of laparoscopic hysterectomy, that showed a slightly higher complication rate compared to the vaginal (0.66%) and the abdominal route (1.22%). It is likely that multicentre studies include centres where this procedure is rarely undertaken and which have a greater number of operators in training (residents and fellows). Does the bias lie in the selection by the single-centre studies of operators and teams highly trained in this laparoscopic technique, or does it lie in disparities between operators in the multicentre studies? Donnez concludes that we should probably not wait for the results of randomised trials before recommending laparoscopic hysterectomy, considering a major complication rate of only 0.44% in 3190 procedures. This statement makes sense. However, a randomised multicentre trial addressing the issue of cost (mean duration of surgery, mean hospital stay, laparotomy conversion rate, postoperative morbidity and average to return to work) should probably be set up including only centres where these procedures are common practice, in view of the importance of the question of the learning curve in this type of surgery.

This paper is thus an important confirmation of the advantages of using laparoscopy for hysterectomy procedures. It is not clear whether the introduction of robotic surgery can improve such excellent results, but in less experienced teams in which the robot may compensate for limited laparoscopic skills, which is still to be proven.

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