Obesity is an excess of fat, specifically triglycerides, stored in adipose tissue, in relation to lean body mass. Body mass index (BMI) is a measure of weight in relation to height (Table 1). Morbid obesity affects nearly 60 million Americans and is becoming increasingly prevalent [1]. In the United States, 26% of adults are now estimated to be overweight, up from just 15% a decade ago. These rates from the Centers for Disease Control and Prevention may be an underestimation of the actual numbers because they rely on self-reported height, and women often report themselves taller than they actually are [2].

Gynecologic complications related to obesity include hirsutism, menorrhagia, endometrial cancer, breast cancer, urinary incontinence, and pelvic organ prolapse [3]. In addition, a number of medical conditions associated with obesity have a profound effect on a patient’s quality of life. These conditions include type 2 diabetes, orthopedic joint problems, and cardiovascular diseases, which in turn lead to a shorter lifespan and lost productivity [4]. There are serious social consequences as well. Isolation and depression develop as a result of obesity [5]. Hence, the gynecologic, medical, and social complications together make obesity a morbid disease state.

Concurrent with the rise in obesity rates, the number of women nationwide who underwent hysterectomy in past years is at 600 000 such procedures annually [6,7]. Second only to cesarean section, hysterectomy is the most commonly performed surgical procedure in women in the United States. In the United States, 66% of hysterectomies are performed via the abdominal route, and 22% are performed vaginally [8], which is reflective of our institutions as well. Important factors in the choice of hysterectomy route include the extent of gynecologic disease and the need to perform concomitant procedures, as well as relative risks and benefits of each type of hysterectomy; patient preference; surgeon competence and preference; and available support facilities. Specifically, in the obese patient in whom hysterectomy is being considered, thorough examination and evaluation are important, including medical comorbidities, to appropriately assess perioperative risk. In obese patients at high risk, the vaginal route is associated with the lowest risk when in the hands of a competent surgeon.

What Is the Preferred Route of Hysterectomy in the Obese Woman?

In general, the vaginal approach to hysterectomy is recommended when feasible, in both obese and non-obese women alike, because of its well-documented advantages and relatively lower complication rates [9]. This recommendation is supported by policy statements from the American College of Obstetricians and Gynecologists and the American Association of Gynecologic Laparoscopists, as well as the medical literature [9–11]. Vaginal hysterectomy is superior to other forms of hysterectomy in terms of patient safety, economics, cosmesis, and perioperative morbidity. A randomized trial conducted by Benassi et al [12] compared the vaginal versus the abdominal route in women with an enlarged uterus (200 to 1300 g). Their study showed that total vaginal hysterectomy (TVH) was associated with shorter operating time, less febrile morbidity, less postoperative...
indication to vaginal hysterectomy [15]. We contend that gynecologists go so far as to say there is no absolute contra-
mass, and inability to access the uterine vessels) do not in-
to vaginal hysterectomy (malignancy, undiagnosed pelvic gery. However, evidence-based absolute contraindications
Who Is a Candidate for Vaginal Hysterectomy?

Table 1

<table>
<thead>
<tr>
<th>Weight</th>
<th>Disease risk relative to normal weight and waist circumference in women</th>
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<tbody>
<tr>
<td></td>
<td>Obesity class</td>
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<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
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<tr>
<td>Normala</td>
<td>18.5–24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25.0–29.9</td>
</tr>
<tr>
<td>Obese</td>
<td>30.0–34.9</td>
</tr>
<tr>
<td></td>
<td>35.0–39.9</td>
</tr>
<tr>
<td></td>
<td>≥ 40</td>
</tr>
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</table>

NA = not applicable.

a Risk of type 2 diabetes, hypertension, and cardiovascular disease.

b Increased waist circumference can also be a marker for increased risk even in persons of normal weight.

From [4].

narcotic use, and shorter hospital stay [12]. Likewise, Johnson et al [11] concluded that vaginal hysterectomy was superior to abdominal hysterectomy in terms of shorter duration of hospital stay, faster return to normal activity, and decreased post-operative febrile morbidity.

The benefits associated with vaginal hysterectomy are accentuated in the obese patient. A retrospective cohort study by Isik-Akbay et al [13] compared perioperative measures of abdominal and vaginal hysterectomy in 369 obese women. Compared with abdominal hysterectomy, vaginal hysterectomy resulted in a lower incidence of postoperative fever (odds ratio [OR], 0.22; 95% confidence interval [CI], 0.12–0.39), ileus (OR, 0.21; 95% CI, 0.06–0.75), and urinary tract infection (OR, 0.21; 95% CI, 0.06–0.75); and shorter mean (SD) operative time (126.8 [58.7] minutes versus 109.7 [68.5] minutes) and length of hospital stay (3.5 [1.9] days versus 1.9 [1.1] days). These findings were replicated in a study by Sheth [14] with an additional comparison group of 200 women of normal weight. Circumstances in which a laparoscopic or abdominal approach may be helpful include hysterectomy in a patient with documented endometriosis, chronic pelvic pain, known pelvic adhesive disease, and concurrent adnexal mass that requires removal.

Who Is a Candidate for Vaginal Hysterectomy?

Obesity is a perceived contraindication to vaginal surgery. However, evidence-based absolute contraindications to vaginal hysterectomy (malignancy, undiagnosed pelvic mass, and inability to access the uterine vessels) do not include obesity. Historically, TVH was the procedure of choice for experienced surgeons such as Heaney and Bonney. Some gynecologists go so far as to say there is no absolute contraindication to vaginal hysterectomy [15]. We contend that extremes of obesity do have an effect, making TVH more technically challenging, but that it should be the default route for hysterectomy in most patients.

Three reasons are often cited for avoiding vaginal hysterectomy: previous abdominopelvic surgery, need for oophorectomy, and nulliparity with lack of uterine descent. In practice, previous pelvic surgery is cited as the reason for choosing abdominal over vaginal hysterectomy in 28% of cases [16]. However, in a review of 621 hysterectomies, Coulam and Pratt [17] concluded that previous pelvic surgery was not a contraindication to vaginal surgery. Other common arguments against vaginal hysterectomy include difficulty in accessing ovaries and the need for oophorectomy. In 1996, Ballard and Walters [18] documented a 60% success rate for retrieving the ovaries vaginally. Routine use of laparoscopic assistance at vaginal hysterectomy for oophorectomy is not supported by evidence but occasionally may be necessary on the basis of patient characteristics and the surgeon’s skill level and familiarity with vaginal oophorectomy [19]. Oophorectomy should not be a contraindication for TVH; proper technique will enable removal of most ovaries vaginally.

The sum of all fears that prevent surgeons from proceeding with TVH is nulliparity with lack of uterine descent. In a large retrospective review of medical records, Le Tohic et al [20] were able to perform vaginal hysterectomies successfully in 209 of 300 patients (69.7%) without previous vaginal delivery. Although vaginal hysterectomy should be the preferred procedure for treatment of benign disease, several patient characteristics are factors in decreasing the rate of success of the vaginal route. These include a narrow pubic arch (<90 degrees), a narrow vagina (2 fingerbreadths), and an undescended and immobile uterus [21] (Table 2). An immobile uterus can be determined when a tenaculum is placed on the cervix of an anesthetized patient to assess whether the cervix descends beyond the ischial spines under cervical traction [23].

Preoperative Evaluation and Preparation of the Obese Woman for Hysterectomy

Preoperative optimization of medical comorbidities associated with obesity must be addressed before proceeding with hysterectomy. The direct association between obesity and several diseases such as diabetes mellitus, hypertension, hypercholesterolemia, osteoarthritis, and ischemic heart disease are well recognized [24]. However, the relationship between body weight and all-cause mortality is more controversial. A high degree of obesity (BMI >35) seems to be linked to higher mortality; however, the relationship between more modest degrees of overweight and mortality is unclear. The largest study that describes the medical complications of obesity is the Nurses’ Health Study, which showed a U-shaped relationship between obesity and all-cause mortality [25]. A multidisciplinary approach involving the surgeon, medical specialists, and the patient’s primary care
provider should be used to optimize patients for surgery. Obesity complicates anesthesia, and thus a preoperative anesthesia consultation with women with BMI >40 is suggested. In obese women, there is greater risk of failed intubation and failed regional blocks. Pendulous breasts, larger anteroposterior diameter of the chest, and reduced chin-to-chest distance increase the risk of a difficult airway. Complications may occur during or after the procedure, and it is imperative that this possibility be discussed. We use a form based on the Royal College of Obstetricians and Gynaecologists guidelines for vaginal hysterectomy consent [26]. Weight loss can be recommended to all patients, although patient motivation will likely dictate the success of this preoperative intervention. In patients who are interested in preoperative weight loss, a thorough discussion should include diet, exercise, and lifestyle changes, and potential referral for bariatric surgery.

Obese patients undergoing surgery are at high risk of venous thromboembolism (VTE) (Table 3). Currently, there are no specific guidelines for thromboprophylaxis in the obese patient undergoing hysterectomy. When operating on obese women who have multiple risk factors for VTE, it would be judicious to consider chemothermoprophylaxis. Otherwise, without inciting risk factors, sequential compression devices may be the only thromboprophylaxis needed.

### Intraoperative Strategies for Success: Vaginal Surgery Techniques in the Obese Woman

Vaginal surgery in the obese woman is complicated by redundant vaginal tissue, prominent buttocks, and lack of decensus. Tips for overcoming morbid obesity in patients undergoing vaginal surgery include patience, confidence, positioning for optimal visualization, and availability of multiple techniques for peritoneal access.

### Positioning for Optimal Visualization

The patient is carefully placed in the dorsal lithotomy position, with her back placed directly onto a foam egg crate mat taped to the bed to minimize sliding on the table during the procedure. The patient is positioned with her buttocks

<table>
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<th>Table 2</th>
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<tr>
<td>Guidelines for determining route and method of hysterectomy to treat benign conditions</td>
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<tr>
<td><strong>Abdominal hysterectomy</strong></td>
</tr>
<tr>
<td>Indicated when any one of the following criteria exists</td>
</tr>
<tr>
<td>1. Vaginal access &lt;2 fingerbreadths at the apex</td>
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<tr>
<td>2. Stage 0 mobility when the Valsalva maneuver is performed</td>
</tr>
<tr>
<td>3. Uterus size &gt;280 g (12-week gestational size)*</td>
</tr>
<tr>
<td>4. Laparoscopic evaluation confirms extrauterine disease that is uncorrectable</td>
</tr>
<tr>
<td><strong>Vaginal hysterectomy</strong></td>
</tr>
<tr>
<td>Indicated when criteria 1, 2, 3, and either 4 or 5 exist</td>
</tr>
<tr>
<td>1. Vaginal access &gt;2 fingerbreadths at the apex</td>
</tr>
<tr>
<td>2. Stage I or higher mobility when the Valsalva maneuver is performed</td>
</tr>
<tr>
<td>3. Uterine size &lt;280 g (12-week gestational size)* and</td>
</tr>
<tr>
<td>4. Disease is assumed confined to the uterus or</td>
</tr>
<tr>
<td>5. Laparoscopic evaluation confirms no extrauterine disease or impediments that need to be corrected</td>
</tr>
<tr>
<td><strong>Laparoscopic assistance</strong></td>
</tr>
<tr>
<td>Indicated when any one of the following criteria exists</td>
</tr>
<tr>
<td>1. Extrauterine disease is suspected</td>
</tr>
<tr>
<td>2. Laparoscopic evaluation confirms the presence of extrauterine disease that is correctable at operative laparoscopy</td>
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</tbody>
</table>

* Uterine reduction techniques such as coring, bivalving, and morcellation may be used to remove larger uteri. Adapted from [22].

<table>
<thead>
<tr>
<th>Table 3</th>
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<tbody>
<tr>
<td>American College of Chest Physicians Risk of venous thromboembolism in patients undergoing surgery</td>
</tr>
<tr>
<td><strong>Level of risk</strong></td>
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<tr>
<td>Low</td>
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<tr>
<td>Moderate</td>
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<tr>
<td>High</td>
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LDUH = low-dose unfractionated heparin; LMWH = low molecular weight heparin; VTE = venous thromboembolism.

* Descriptive terms are purposely left undefined to allow individual clinician interpretation.

Modified from [27]. Reproduced with permission from the American College of Chest Physicians.
over the edge of the table cutout to gain optimal exposure. If necessary, the pannus can be retracted cephalad and vertically to avert aortocaval compression. Candy cane stirrups are ideal for access to the perineum, with the maximum number of assistants [28]. Although some case studies have detailed femoral nerve injury from the use of candy cane stirrups, prospective data do not show an association between candy cane stirrups and nerve injury [29]. Hyperflexion or substantial external rotation at the hip should be averted to reduce femoral nerve injury. The bladder is emptied via continuous drainage throughout the procedure. Others have advocated catheterization of the patient at the start of the procedure, administering intravenous indigo carmine dye, and removing the Foley catheter to avoid having excessive equipment on the surgical field.

Exposure of the operative field can be difficult in obese women, whether an abdominal or vaginal route is proposed [30]. Positioning the patient in a few degrees of Trendelenburg, elevating the surgical table, and having experienced assistants are key for visualization. In addition, some surgeons advocate a trial of Trendelenburg positioning at the start of the procedure to determine whether the patient will tolerate the position from a cardiopulmonary standpoint.

The number of retractors deployed is limited because they can create a falsely narrowed surgical field. Rather, suction is used to retract the tissue gently to optimize mobility and to avert soft tissue injury. The Heaney technique is used in all vaginal hysterectomy procedures [31]. Firm downward traction is applied to the cervix using a double-tooth Jacob tenaculum or a Lahey clamp. Traction and countertraction help to increase the distance between the clamps and the ureter, thus minimizing the risk of ureteral injury during vaginal hysterectomy (Fig. 1).

These patients, consider approaching the pelvic organs through the cul-de-sac. It contains no fat cells, as compared with the abdominal wall, which contains many adipocytes [34]. Even laparoscopic surgeons use the vaginal route for peritoneal access and for transuterine insertion of a Veress needle to start insufflation [35]. Peritoneal access should be obtained using surgical techniques such as traction-countertraction, sharp dissection, and careful entry into the proper tissue plane.

**Posterior Peritoneal Entry**

Difficult posterior entry may be compounded by prominent buttocks and vaginal sidewall prolapse. Common techniques for overcoming difficult posterior entry include the Döderlein-Kronig (Döderlein) approach or taking extraperitoneal bites. The Döderlein approach includes anterior delivery of the uterine corpus for hysterectomy [36]. The pedicles are then ligated in a craniocaudal direction, similarly as in abdominal hysterectomy. Tipping the uterus also moves the arteries far from the ureter. Inability to enter either or both cul-de-sacs should not preclude continuation of the vaginal approach. The uterine arteries can still be secured...
extraperitoneally until better descensus of the uterus is obtained. Liberal use of a digital rectal examination to demarcate the border between the vagina and rectum is encouraged. If a rectal injury is identified, it can usually be repaired primarily through a transvaginal approach using conventional techniques. Dividing the posterior cervix in the midline can open into the posterior peritoneum.

Anterior Peritoneal Entry

Cystotomy is more common in obese women than in thin women; thus, good surgical technique and patience should be used [37]. Dissecting in the proper tissue plane can be achieved with injection of saline solution, 0.5% lidocaine with 1:200 000 epinephrine, or pitressin (10 IU pitressin diluted with 25 mL sterile saline solution) into the potential spaces. Difficult entry into the anterior cul-de-sac can be facilitated using 3 specific techniques: digital palpation of the anterior reflection via the posterior cul-de-sac, placement of a uterine sound in the bladder and palpating for the bladder borders, and retrograde filling of the bladder. One way to start is to divide the uterosacral ligaments with a small bite perpendicular to the cervix [38]. Reassess entry into the anterior compartment with advancing descent, but do not rush to enter the anterior compartment if more descent can be achieved. Because of the documented increased risk of cystotomy, intravenous indigo carmine dye is used to identify ureteral and bladder injuries intraoperatively.

Prophylactic Apical Support

Whatever the indication for hysterectomy, apical support should be addressed at vaginal hysterectomy, in particular in obese women who are at risk. Many authors advocate using this procedure as part of every vaginal hysterectomy to minimize future vaginal vault prolapse [39].

McCall [40] described the technique of surgical correction of enterocele and a deep cul-de-sac at vaginal hysterectomy. The advantage of the McCall culdoplasty is that it not only closes the redundant cul-de-sac and associated enterocele but also provides apical support and lengthening of the vagina.

Postoperative Complications of Vaginal Surgery in the Obese Woman

Postoperative complications after vaginal hysterectomy in the obese woman do not differ from those in non-obese patients in terms of type but in the rate at which they occur. In a large prospective study in Finland of 2345 vaginal hysterectomies, the proportion of women affected by any complication was higher in obese women than in non-obese women [41]. Fever, surgical site infections, lower urinary tract infection, and postoperative pulmonary complications were the most common complications observed after vaginal hysterectomy. Obesity is an increasingly important risk factor for perioperative complications.

Venous Thromboembolism

VTE, which includes deep venous thrombosis and pulmonary embolism, is one of the leading causes of preventable perioperative morbidity and mortality. Several studies have shown obesity as an independent risk factor for development of VTE. In a meta-analysis performed by Ageno et al [42], the OR for developing VTE was 2.33 (95% CI, 1.68–2.34) in women with a BMI >30. Although no studies have investigated the specific risk of VTE in obese women undergoing hysterectomy, Parkin et al [43] recently performed a large cohort study that investigated the interaction between surgery and obesity in development of VTE. That study included 640 288 middle-aged women who underwent various surgical procedures, of which 13% were gynecologic. The incidence of VTE was significantly higher in obese women regardless of whether they underwent surgery or not. Compared with women of normal weight and obese women who did not undergo surgery (OR, 0.10; 95% CI, 0.09–0.10 and OR, 0.19; 95% CI, 0.18–0.20, respectively), the VTE rate was 4-fold higher in obese women after day surgery (OR, 0.51; 95% CI, 0.41–0.63 and OR, 0.75; 95% CI, 0.64–0.88, respectively) and 40-fold higher after inpatient surgery (OR, 94.77; 95% CI, 4.38–5.19 and OR, 7.00; 95% CI, 6.60–7.43, respectively) [43].

There is currently no specific guideline for thromboprophylaxis in obese patients undergoing hysterectomy. When operating on obese women who have multiple risk factors for VTE, we recommend considering chemotherapy thromboprophylaxis based on the recommendations provided by the American College of Obstetricians and Gynecologists and the American College of Chest Physicians. Typically, we use 40 mg enoxaparin sodium (Lovenox) injected subcutaneously 2 or 3 times daily, on the basis of the above-mentioned guidelines.

Febrile Disease

Febrile disease can add substantial postoperative morbidity, in particular in obese patients with medical comorbidities. Although infection can successfully be prevented in most patients with proper use of prophylactic antibiotic therapy, surgical site preparation, and proper surgical techniques, when febrile disease develops, identification of its source and subsequent treatment are important. The site of infection ultimately dictates the treatment course, and is beyond the scope of this review. The most common types of infections associated with hysterectomy include surgical site infection and urinary tract infections (discussed in subsequent sections). Although less common, abscess formation should also be included in the differential diagnosis.

Insofar as the role of the surgical route of hysterectomy in obese women, current data suggest a significantly lower risk of febrile disease in obese women undergoing vaginal hysterectomy as compared with abdominal hysterectomy.
(9.4% versus 32.3%; p < .001) [15]. When obese and non-obese women undergoing vaginal hysterectomy are compared, there seems to be no difference in risk of febrile disease [44].

**Surgical Site Infection**

With abdominal hysterectomy, the principal risk associated with obesity is wound infection [41]. Because there is no wound with vaginal hysterectomy, it is intuitive to suggest that the vaginal approach may be more favorable in this respect in obese women.

Specific risk factors in obese patients include increased bacterial growth on skin; decreased vascularity in the subcutaneous tissue; increased tension on wound closure due to increased intra-abdominal pressure; decreased tissue concentrations of prophylactic antibiotics; and a higher prevalence of diabetes, with poor glucose control and longer operating time [45]. In a retrospective cohort study from 2007, obese patients who underwent vaginal surgery were matched to patients with normal weight and perioperative comorbidities, and complications were analyzed [46]. Results showed no difference in perioperative complications between obese and non-obese patients. However, there was a higher rate of surgical site infection in the obese population [46]. In the FINHYST prospective study of hysterectomies, obesity was identified as an independent risk factor for infection regardless of surgical route [41]. With regard to vaginal hysterectomy, there was a significantly greater risk of infection in women who were obese (adjusted OR, 1.77; 95% CI, 1.03–3.05; p = .04) or extremely obese (adjusted OR, 2.68; 95% CI, 1.26–5.71; p = .01).

The mechanisms for increased infections in the obese are likely multifactorial. One theory suggests that the fat blood supply is unable to keep pace with the increased needs of the tissue, resulting in tissue ischemia and hypoxia. In addition, obese patients have the potential for more dead spaces, which leads to a higher risk of hematoma and seroma. Decreased tissue concentrations of prophylactic antibiotics may enable organisms to duplicate more readily. In obese women undergoing hysterectomy, the abdominal approach results in substantially higher rates of wound infection as compared with those undergoing vaginal hysterectomy [45]. Overall, vaginal surgery seems to be a safer approach in obese women.

**Urinary Tract Infection**

Urinary tract infection (UTI) is one of the most common infections observed in the postoperative period. In general, risk factors for postoperative UTIs include procedure-related factors such as bladder instrumentation via cystoscopy and catheter placement [46]. In the obese population, several studies have suggested that increased BMI is an independent risk factor for UTI [47,48]. In addition, in obese women comorbidities such as diabetes mellitus may predispose these women to complicated cystitis.

Few studies have investigated the role of obesity in postoperative UTI. In one study that compared obese women undergoing vaginal hysterectomy vs abdominal hysterectomy, the rate of postoperative UTI was significantly higher for the abdominal route (7.4% vs 1.7%; p = .01). In another study that compared 444 vaginal hysterectomies and 503 abdominal hysterectomies, increasing BMI was associated with a significantly higher risk of UTI in women undergoing vaginal hysterectomy (BMI <20, 0%; BMI 21 to 25, 1%; BMI 26 to 30, 3%; and BMI ≥30, 6%; p < .05) [49].

Empiric treatment of postoperative UTI should be based on local speciation and resistance patterns. Reasonable options include nitrofurantoin monohydrate/macrocryystals, trimethoprim-sulfamethoxazole, fosfomycin trometamol, or pivmecillinam [48]. In obese patients with risk factors for complicated cystitis, culture sensitivities can help guide treatment. Obese patients may require prolonged postoperative catheterization. In patients who develop a catheter-associated UTI, a urine culture should be sent for analysis to guide antibiotic therapy, and the catheter should be discontinued or replaced if possible [50].

**Lower Urinary Tract Injury**

During vaginal hysterectomy, the bladder can be perforated during entry into the anterior cul-de-sac. Data regarding the rate of lower urinary tract injury during vaginal hysterectomy in the obese patient are scarce. Several retrospective studies have shown that the rate of serious injury is similar in obese and non-obese women undergoing vaginal hysterectomy to treat benign disease [51,52]. Another study showed that injury to the bladder is the most common lower urinary tract injury during vaginal hysterectomy, with a rate of up to 2% [14]. Additional studies are needed to study further the complication rates in obese women undergoing vaginal hysterectomy; however, the rate will likely still be lower than for abdominal routes of hysterectomy.

Although uncommon, ureteral injury can occur during vaginal hysterectomy. No rate of ureteral injury has been established in obese women; however, the current literature suggests no difference in injury rate compared with that in non-obese women. The rate of ureteral injury during vaginal hysterectomy is <0.1%. In a large Finnish series of 62 379 hysterectomies, the rate of ureteral injury during vaginal hysterectomy was 0.2 per 1000 procedures [53]. Concomitant surgery to treat prolapse adds additional risk of ureteral injury. In a large retrospective study of women undergoing hysterectomy to treat benign disease, the rate of ureteral injury in those undergoing only vaginal hysterectomy (0.9%) was lower than in women undergoing vaginal hysterectomy with concomitant prolapse repair (1.7%) [54].

Early recognition of lower urinary tract injury is of paramount importance. Cystoscopy can be helpful in identifying lower urinary tract injury. Although surgeon practice patterns differ insofar as use of intraoperative cystoscopy, one study has suggested that universal cystoscopic evaluation
during vaginal surgery provides cost savings only if the rate of injury is >2% [55]. As with the data for bladder injury in the obese, no evidence currently exists to suggest an increased risk of ureteral injury in obese women undergoing vaginal hysterectomy. In general, regardless of BMI, the risk of ureteral injury in women undergoing hysterectomy and concomitant prolapse repair exceeds 2%. We therefore advocate routine cystoscopic evaluation, in particular in cases of concomitant prolapse repair.

Conclusion

The prevalence of obesity is increasing. Hysterectomy in the morbidly obese patient is difficult and should be completed by high-volume surgeons in centers equipped to handle the special needs of the morbidly obese.

References