

Bleeding Complications After CASH

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Abstract

We assessed the frequency and studied the possible mechanisms of bleeding after classic abdominal Semm hysterectomy (CASH) in a retrospective, nonrandomized review of 70 women (47 premenopausal) undergoing the procedure with 1-year minimum follow-up. In several women CASH was associated with adhesiolysis, and in more than 50% with bilateral oophorectomy. Of the 47 patients who were menstruating prior to surgery, 6 (13%) reported postoperative menstruation. Two additional patients required repeat surgery, and one required transfusion. Endometrial glands were present in one excised specimen, suggesting the possibility that menstruation and hematometra may occur.

Laparoscopic-assisted vaginal hysterectomy (LAVH) offers the advantages of vaginal surgery's shorter recovery and cosmetic incisions to patients who would have otherwise undergone an abdominal procedure. The classic abdominal Semm hysterectomy (CASH)¹ differs from other procedures in that it leaves a portion of the cervix and uterine fundus behind. By removing the cervix with a 15- to 20-mm morcellator, advocates of the technique claim that the patient's transformation zone is removed and with it, the risk of future cancer. Additional benefits are faster healing and improved sexual function postoperatively.

We assessed the frequency of bleeding after the CASH operation in a series of 47 women.

Materials and Methods

From March 1992 to December 1992, 70 women underwent CASH at our institution. Their ages ranged from 36 to 68 years (average 43 yrs), and parity from zero to three; 54% had undergone previous surgery. Twenty-three (36%) were menopausal and not menstruating before surgery, leaving 47 patients for analysis of postoperative bleeding. Indications for surgery were menorrhagia (32 women), symptomatic myomata (31), and chronic pelvic pain (18); some women had more than one indication.

Thirty-eight patients (54%) underwent laparoscopic bilateral adnexectomy and 14 (20%) adhesiolysis

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as part of the CASH. The mean hospital stay was 4 days, including the day of surgery. Some morbidity was associated with the procedures; four patients required transfusion and nine had postoperative fever (37.5–39°C). Other complications were abdominal wall hematoma in three patients (4%) and retroperitoneal hematoma in one.

All of the patients who had their ovaries removed and those who were menopausal were taking estrogen replacement with daily ethinyl estradiol or Estraderm TTS (Ciba, Summit, NJ) 50 mg twice/week. Their therapy included medroxyprogesterone acetate 10 mg for 10 days every 3 months. Patients were followed for at least 1 year postoperatively.

Results

Two patients underwent a second operation for perioperative bleeding from the cervix. The first required suturing of the cervical stump after bleeding and hypotension were noted in the recovery room. The second experienced uncontrollable cervical bleeding on the tenth postoperative day, which required a trachelectomy. Endometrial glands were noted in the removed tissue (Figure 1).

An additional six women complained of postoperative menstruation, all of whom were premenopausal. Thus 13% of 47 patients at risk for continued menstruation experienced this complication after CASH. They have been followed conservatively with Papanicolaou smears and ultrasound to this time.



FIGURE 1. Photomicrograph shows residual endometrial glands in the cervical stump.

Discussion

Technically, supracervical hysterectomy is a less risky procedure than total hysterectomy performed through the laparoscope. Because of the decreased risk of dissection of the ureter and main division of the uterine artery, among other factors, several studies reported shorter operation time, shorter hospitalization, and fewer complications with the supracervical procedure.^{2,3}

The advantage of the CASH to the patient is twofold. First, because of the remaining cervical tissue, the vaginal cuff does not require suturing. The blood supply to the lower uterine segment is preserved, as the main branch of the uterine artery is not severed. Preservation of Frankenhauser's plexus of sensory innervation, carried in the uterosacral ligaments, also is left intact. This may decrease postoperative pain and prevent granulation tissue from forming.¹ Another reason for decreased postoperative pain compared with vaginal hysterectomy may be the lack of traction on the uterosacral ligaments in the CASH procedure.

Second, some clinicians believe that the cervix remaining in the vagina adds to the woman's sexual function after hysterectomy.⁴ Others dispute this finding, claiming that memory of preoperative sexual function retrospectively taken after surgery is biased by the patient's present condition.⁵ No prospective study has assessed sexuality with and without the cervix after hysterectomy, including preoperative sexual function.

Before the introduction of cytologic screening into the United States, supracervical hysterectomy was abandoned because of the risk of cervical cancer in the residual tissue. The actual frequency of cervical stump carcinoma is quite low today.⁶ The CASH technique claims to have eliminated the risk by excising the transformation zone. No cases of cervical cancer have been reported after these procedures. This technique was introduced in 1991, however, and thus only short-term follow-up is available. The presence of residual endometrial glands in the excised specimen in one of our patients and menstruation in six others raises the possibility of adenocarcinoma occurring in the future. Residual glands may be present in the 23 patients who were menopausal at the time of surgery and are not reporting bleeding, as well as in the premenopausal patients who did not experience postoperative bleeding. All of the six women who experienced

bleeding had their ovaries preserved, and none were taking estrogen replacement. The role of the ovaries, if any, in postoperative bleeding is unclear. We recommend that physicians consider adding a progestational agent to the regimen of patients receiving estrogen replacement therapy who have undergone CASH until the issue of residual glands is better studied.

Two subsets of patients existed within the group that experienced postoperative bleeding: those with immediate postoperative bleeding (2 patients), and those with recurrent menstruation (6). Possible means to prevent the immediate complication might be to secure the uterine artery and attend to bleeding from the cervical stump at the time of morcellation. Recurrent menstruation may be an unavoidable complication of CASH. Use of a larger morcellator might remove more endometrial glands; however, this would increase the risk of injury to vital structures adjacent to the cervix. Furthermore, it is difficult in many vaginas, particularly in menopausal women, to introduce the morcellator in its current size, and a larger instrument would only compound this problem. Perhaps coagulating the remaining cervix and lower uterine segment with a rollerball electrode attached to a resectoscope would manage the problem⁷ by destroying remaining glands before morcellation at hysterectomy. Postoperative ultrasound might demonstrate cystic areas in the remaining myometrium that could be either hematometra or adenomyosis.⁸

With the many techniques available for LAVH, the surgeon should understand the risks and benefits of each method. We are not aware of other series that might give a comparative frequency of bleeding after CASH,

but our rate of 13% is troubling. The more long-term outcome of the six bleeding patients will be reported, as these women are farther from their surgical dates. Our numbers of course are too small to be of significance statistically. Perhaps other series will demonstrate complication rates that may resemble these early numbers.

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