

Gender Affirming Surgery

Hysterectomy and Salpingo-Oophorectomy

A summary for health care providers



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SHERBOURNE HEALTH

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This summary provides information to facilitate the discussion of gender affirming surgery between Ontario health care providers and patients. It is not exhaustive and does not replace the informed consent process between surgeon and patient.

DESCRIPTION

Hysterectomy: removal of the uterus

- *Total Hysterectomy* is the removal of the entire uterus including the cervix
- *Subtotal Hysterectomy* is the removal of the body of the uterus, but not the cervix

Salpingo-Oophorectomy (either bilateral or unilateral)

- *Salpingectomy* is the removal of fallopian tubes
 - Bilateral salpingectomy (BS)
- *Oophorectomy* is the removal of ovaries
 - Bilateral salpingo-oophorectomy (BSO)
 - Unilateral salpingo-oophorectomy (USO)

INTENDED RESULTS

- » Align anatomy with gender identity
- » Reduction in gender dysphoria and/or gender incongruence
- » Improve mental health and well being
- » Stops menses and/or breakthrough bleeding
- » Remove risk of pregnancy
- » Reduce risk of cancer (i.e. cervical, ovarian)
- » Reducing need for cancer screening (i.e. Pap smears)
- » Salpingectomy at the same time as hysterectomy is recommended to reduce ovarian cancer risk
- » Oophorectomy removes the main source of estrogen
- » Allows for vaginectomy which may be required in further lower surgeries (i.e. metoidioplasty/phalloplasty)

SIDE EFFECTS

- » Irreversible

Fertility effects:

- » Infertility if removal of ovaries as will no longer have eggs for fertility
- » Inability to carry embryo if removal of uterus
- » If ovaries retained, will require assisted reproduction for use of eggs for fertility
- » Almost no estrogen production (puts patient at risk for osteoporosis, other morbidities, if an exogenous form of sex hormone is not used or contraindicated)

ALTERNATIVE TREATMENT OPTIONS

- Hormone therapy (i.e. testosterone, progesterone) to stop menses
- Hormonal IUD to induce amenorrhea/infrequent menstrual bleeding (stop menses or lighten menses) and provide protection against pregnancy
- GnRH analogues to stop ovulation and stop menses

SURGICAL OPTIONS

- Total or Subtotal Hysterectomy with BSO/USO
- Total or Subtotal Hysterectomy with BS with ovary retention (bilateral or unilateral)

SURGICAL TECHNIQUES

- Minimally invasive (laparoscopic or vaginal) recommended without pelvic pathology. Laparoscopic approach most common. Laparotomy may be necessary in some cases
 - **Total laparoscopic hysterectomy:** Procedure done through 3-4 small abdominal incisions, each around 5mm-1 cm, uterus/tubes/ovaries are removed through vagina
 - **Subtotal laparoscopic hysterectomy:** procedure done through 3-4 small abdominal incisions. Uterus/tubes/ovaries removed through one enlarged incision to morcellate tissue (break down into smaller pieces) within a surgical bag
 - **Laparoscopically assisted vaginal hysterectomy (LAVH):** combination of laparoscopy and vaginal surgery, removal of uterus/fallopian tubes/ovaries through vagina
 - **Vaginal hysterectomy (VH):** incision is through the vagina, uterus/tubes/ovaries removed through vagina
 - **Laparotomy (abdominal) Hysterectomy:** uterus/tubes/ovaries removed through one large incision through the abdomen



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POTENTIAL RISKS/COMPLICATIONS COMMON TO MOST SURGERIES



Risks are increased with smoking, immunosuppressant drugs, clotting disorders, conditions that impair healing, BMI <18.5 or >30

General Surgical Risks

- Bleeding, if excessive may require blood transfusion
- Deep Vein Thrombosis, Pulmonary Embolism (blood clots in legs, lungs)
- Injury to surrounding anatomical structures (organs, nerves, blood vessels)
- Hematoma (collection of blood)/seroma (collection of fluid)
- Infection/abscess (collection of pus)
- Wound dehiscence (wound opening), delayed healing
- Nerve damage, loss of sensation, hypersensitivity, neuropathic (nerve) pain
- Chronic pain
- Scarring (can be prominent especially if history of keloid)
- Dissatisfaction with appearance/function
- Need for revision(s)
- Post-operative regret

General Anesthetic Risks

- Respiratory failure
- Cardiac failure/arrest
- Death
- Damaged teeth
- Aspiration pneumonia
- Nausea/vomiting

SURGICAL RISKS AND COMPLICATIONS OF HYSTERECTOMY AND SALPINGO-OOPHORECTOMY

- Accidental **damage to surrounding tissues** such as bowel perforation, injury to bladder, ureter, rectum, or other internal organs
- Accidental damage to blood vessels which may lead to need for blood transfusion and may be needed for future phalloplasty (inferior epigastric, circumflex iliac)
- Surgical site **infections** including urinary tract
- Pelvic organ prolapse (vaginal vault falls out of its original position)
- **Fistulas** (abnormal connection, which allows fluids/solids to pass between two structures that should not be connected)
 - Uro-vaginal (abnormal connection between bladder and vagina)
 - Recto-vaginal (abnormal connection between rectum and vagina)
 - Ano-vaginal (abnormal connection between anus and vagina)
- Changes in sexual sensation or decreased intensity of orgasm
- Decreased libido
- Ovarian remnant syndrome (pain and bleeding if some ovarian tissue is left behind)
- Vaginal cuff bleeding (bleeding from the top section of vagina which was closed)
- Hot flashes/night sweats and other symptoms of oophorectomy if no exogenous sex hormone is used
- Vaginal vault dehiscence: not having good healing at the vaginal vault
- Blood clots (Deep Vein Thrombosis, Pulmonary Embolism)

PRE-OPERATIVE CARE

PRE-SURGICAL CONSIDERATIONS

- Consider referral to the Sherbourne Health's Acute Respite Care (ARC) Program for post-operative support if socially isolated, under-housed or homeless
- **Reproductive options and fertility counselling** should be discussed prior to surgery
- Hysterectomy + BSO will lead to permanent loss of fertility
- Egg preservation or ovary preservation can leave some fertility options open
- Post-oophorectomy, continuous exogenous sex hormone is recommended to address increased risk of osteoporosis and other medical morbidity, as long as deemed medically safe and beneficial
- Pelvic pathology/previous surgery should be taken into consideration when discussing surgeries and technical approach
- Discuss goals related to future hormone use
- Bilateral salpingectomy at benign hysterectomy is most effective strategy for preventing majority of ovarian serous carcinoma
- No evidence for increased ovarian cancer risk in this population
- Genetic risk (i.e. BRCA1/2, PALB2) that increases ovarian cancer risk and should be taken into consideration with surgical options
- Previous cervical cytology abnormalities
- Consideration of ovary preservation (unilateral or bilateral) for retaining fertility, endogenous estrogen production and mitigation of possible medical risk (bone health, cardiovascular health, all-cause mortality, neurocognitive, sexual)
- If planning future metoidioplasty (more than just simple clitoral release) or phalloplasty, most surgeons require the hysterectomy with or without BSO be completed at least 6 months prior
- If considering future lower abdominal flap phalloplasty, avoid transverse hysterectomy scars ("Pfannenstiel incisions") in abdominal hysterectomies as the transverse incision disrupts flap vasculature. Vertical abdominal incisions are preferred
- **Smoking cessation** is strongly recommended both pre-op and post-op to optimize wound healing. Follow surgeon's advice on time periods to avoid smoking, alcohol and other substances
- Discuss aftercare plan and social supports. Typical recovery is two weeks rest, complete recovery from LAVH is four-six weeks, and complete recovery from laparotomy/abdominal hysterectomy is six to eight weeks.

Hospitals tend to have standard pre-operative processes which may include:

- Pre-surgical: CBC blood test, Beta-HCG
- Pelvic exam/ultrasound recommended if pelvic pathology present/suspected, ultrasound if unilateral oophorectomy
- Pre-admission visit to review health history and provide teaching (pre/post-op care)
- Anesthesia and/or medicine consult may be required, depending on health history

Anesthesia will discuss:

- Which medications to stop and when
- Anesthetic approach and risks pain control measures

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POST-OPERATIVE CARE

- Foley catheter inserted during procedure, potential for reinsertion if unsuccessful trial void
- If vaginal route (LAVH/VH), potential for vaginal trauma, repair and bleeding
- Monitor for excessive vaginal bleeding
- Bleeding etiologies: hypergranulation, atrophy, vaginal separation, bleeding vessel
- **Light bleeding** is common for the first 1-2 weeks post-op, can last up to 4 weeks. Can taper off initially and then return a few weeks later.
- Monitor for signs of infection and perform incision care
- Pain management
- Follow surgeon's recommendations on restrictions to activities. Some general guidelines include:
 - No lifting for two weeks, avoid stretching or bending for two weeks
 - No heaving lifting (max 10 lbs.)/strenuous activity for six weeks
 - No vigorous exercise for three months

LONG-TERM MEDICAL CARE

- Oophorectomy performed before the age of 45-50 years is associated with increased all-cause mortality, cardiovascular death and dementia in cisgender women. This risk may not transfer onto trans population due to use of testosterone.
- **Testosterone dose post-oophorectomy:**
 - Dosing typically remains the same
 - Dose reduction may be considered as long as it is adequate to maintain bone density. Patients should be informed of possible reduced muscle mass, energy and libido at lower doses. Adequacy of dosing in those on low testosterone replacement post-oophorectomy may be assessed by following LH and FSH levels and titration of dosing to maintain these in the premenopausal range
- With total hysterectomy (and no history of gynecologic cancer including no abnormality of surgical pathology), individuals no longer require pap smears
- **Subtotal hysterectomy**
 - Cyclical bleeding can occur for up to two years post-op
 - Cervical cytology (pap testing) if sexually active
- **If ovaries retained:**
 - No additional surveillance is required
 - Annual examinations should include palpation of adnexa
 - Concerns for masses should be assessed with appropriate imaging (ie. Transabdominal or vaginal)
- **If uterus retained:**
 - Cervical cancer screening as per local guidelines
 - No additional endometrial surveillance required
- **Minimize risk for osteoporosis:**
 - Ensuring long-term exogenous sex hormone replacement (i.e. testosterone)
 - Monitor LH and FSH levels to assess if hormone dosage is adequate for bone health
 - Adequate dietary sources of Calcium and Vitamin D supplementation
 - Reduce smoking
 - Perform weight-bearing activities
 - Consider Bone Mineral Density test for anyone post-oophorectomy, who has not been on hormones for 5 years, regardless of age

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DISCLAIMER

The information provided here is generalized and is not medical advice. It is recommended that all patients have a pre-operative consultation with their surgeon to receive individualized information including the specific surgeon's technique, complication rates and recommendations. This is a dynamic document that is subject to change, as the knowledge of gender affirming surgeries changes.

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