Gender Affirming Surgery

Orchiectomy

A summary for health care providers

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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

Bilateral simple orchiectomy is the removal of the testicles and spermatic cord.

INTENDED RESULTS

- Align anatomy with gender identity
- Reduction in gender dysphoria and/or gender incongruence
- Improve mental health and well being
- Eliminates main source of endogenous testosterone production and its effects
- Patients can stop androgen-blockers, decreasing the side effects, risk and medical-financial cost of hormone therapy
- May decrease dosing requirements of hormone therapy including estrogen and progesterone
- If tucking, may alleviate tucking related discomfort

SIDE EFFECTS

- Irreversible
- Permanent infertility (no longer producing sperm)
- Almost no testosterone production - puts patient at risk for osteoporosis if a sex hormone is not used
- Side effects of low testosterone may include erectile dysfunction, decreased libido, and decreased energy
- Prostate may decrease in size
- Possible atrophy (shrinking) of the scrotal tissue
- Only a small amount of the volume of ejaculate fluid is derived from the testicles. After orchiectomy, not much change should be expected.

ALTERNATIVE TREATMENT OPTIONS

- “Tucking” genitals
- Medications: Androgen Blockers, GnRH analogues, Estrogens
- Vaginoplasty (surgical construction of a vulva with/without a vaginal canal, which includes simultaneous orchiectomy)

SURGICAL TECHNIQUES AND OPTIONS

- Procedure typically done through a 2-4 cm midline scrotal incision
- If any suspected testicular pathology, alternate techniques may be considered (inguinal incision)
- Can be done with or without scrotectomy (removal of scrotal skin)
- Scrotectomy will lead to a long >7cm, midline incision/scar extending up the genitals
- General or spinal anesthesia
- Day surgery (no overnight stay)

Implications on Future Surgery

- If scrotectomy (removal of scrotal tissue) is performed, this will remove tissue that is typically used to create the vaginal canal during vaginoplasty. After scrotectomy there remains an anatomic bulge in this area, but the skin quality will be consistent with the surrounding perineal skin (i.e. smooth). Scrotectomy may exclude the option for future vaginoplasty so should not be done if ANY future bottom surgery is being considered

- Scrotal atrophy may affect the amount of skin available for future genital surgery (i.e. Vaginoplasty), however, the amount of atrophy is not typically a significant barrier. If there is very little tissue available prior to orchiectomy, a presurgical exam with a surgeon who performs vaginoplasty can assess for future impact.

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 ORCHIECTOMY

- **Hematoma**, bleeding into the scrotum, is the most common complication. This may lead to a palpable lump and feel similar to pre-surgery anatomy. This may take up to 6 weeks or longer to resolve.
- **Numbness/loss of sensation in certain areas** around the surgical site, including the upper thigh and scrotum may occur. This is usually temporary but may be permanent.
- **Stumps of spermatic cords** may be palpable.
- **Wound separation along incision.** Increased risk if scrotectomy is performed.

PRE-OPERATIVE CARE

PRE-SURGICAL CONSIDERATIONS

- **Fertility counselling** +/- sperm banking
- Post-orchiectomy continuous exogenous sex hormone is recommended to address the increased risk of osteoporosis, as long as it is deemed medically safe and beneficial
- **Smoking cessation** is strongly recommended both pre-op and post-op to minimize complications and optimize wound healing
- Follow surgeon's advice on time periods to avoid smoking, alcohol and other substances
- Consider pros/cons of scrotectomy, as it will affect the option of future vaginoplasty
- Orchiectomy can be done at the same time as vaginoplasty rather than as a separate procedure

IMMEDIATE PRE-OPERATIVE CARE

ANESTHESIA WILL DISCUSS:

- Which medications to stop and when
- Anesthetic approach and risks
- Pain control measures
- Patients should ask their surgeon if there are any additional fees that are not OHIP covered

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

- 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

POST-OPERATIVE CARE

IMMEDIATE POST-OPERATIVE CARE

- Androgen blocker can be stopped immediately post-operatively
- Incision site should be kept clean
- Surgical dressing typically removed at home, usually on post operative day 2
- Bruising, swelling, numbness and/or shooting/ burning pain can occur
- Over the counter pain medication is typically sufficient to manage pain
- Activity levels – light activity encouraged (such as walking)

INTERMEDIATE POST-OPERATIVE CARE

- No heavy lifting, strenuous activity, bathing or swimming for 2-3 weeks or until incision has healed
- Anticipate needing 1-4 weeks off work, depending on nature of work, for recovery

LONG-TERM MEDICAL CARE

- Estrogen dose post-orchiectomy:
  - Depending on estrogen dosage, dose reduction may be considered as long as it is adequate to maintain bone density. Adequacy of dosing in those on low estrogen replacement post-orchiectomy may be assessed by following LH and FSH levels
- Minimize risk for osteoporosis:
  - Ensuring long-term exogenous sex hormone replacement (estrogen)
  - Monitor LH and FSH levels to assess if hormone (estrogen) dosage is adequate for bone health
  - Ensure adequate calcium and vitamin D intake
  - Reduce smoking
  - Perform weight-bearing activity
  - Consider bone densitometry for anyone post- orchiectomy, who has not taken exogenous hormones for 5 years or more, 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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