NON-HOSPITAL MEDICAL AND SURGICAL FACILITIES ACCREDITATION PROGRAM

College of Physicians and Surgeons of British Columbia

Liposuction

GUIDELINE

These accreditation materials have been adapted with permission from documents developed by the College of Physicians and Surgeons of Alberta.

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Contents

Preamble

This document supplements the College's *Non-Hospital Medical/Surgical Facilities Policy Manual* and addresses privileges and standards for tumescent liposuction. The overview and recommendations provided are based on the ASPS Practice Advisory on Liposuction (www.plasticsurgery.org). The judgment regarding individual patient care is ultimately the physician's responsibility.

Definition: Liposuction, the surgical intervention designed to treat superficial and deep deposits of subcutaneous fat. With improved techniques recontouring of large and/or multiple areas of the body are possible. Tumescent liposuction is a specific method of suction lipolysis, which relies on local anesthesia by subcutaneous infiltration of large volumes of dilute lidocaine and epinephrine. Acceptable technique involves infusing 1 cc of infiltrate solution for every 1 cc of aspirate. Oral or IV sedation or general anesthesia may be used to lessen patient anxiety and awareness but should not be used as a substitute for the use of sufficient tumescent infiltration to induce anesthesia in the surgical field. Tumescent liposuction should be regarded as a regional or systemic anesthesia as there is potential for systemic toxic effects.

Training and Experience

The minimum training necessary in liposuction depends on the physician's base specialty and ongoing surgical experience. Not every physician is a candidate for privileges in liposuction. Particularly those who are not surgical specialists shall be required to provide evidence of training and satisfactory performance or surgical procedures in liposuction.

Eligibility for privileges in liposuction shall include a minimum of the following:

1. Evidence of adequate training in liposuction during a residency program; or
2. Completion of postgraduate training in liposuction commensurate with a background of surgical training and experience of the applicant which is acceptable to the College.[1]
3. In addition to the surgical technique, training includes instruction on fluid and electrolyte balance, potential complications of liposuction and tumescent anesthesia and other forms of anesthesia employed.

Conditions may be attached to privileges in liposuction, restricting physicians to one or more of the following:

1. Specified anatomical sites;
2. Maximum volume of aspirate;
3. Type of anesthesia (e.g. patient awareness to be maintained at all times);
4. Technique (e.g. not using internal ultrasound);
5. Maintenance of competence requirements (e.g. number of procedures to remain active; peer review requirements; CME requirements; and
6. Periodic practice review

The College may require a preliminary assessment prior to approving surgical privileges when there is otherwise insufficient information about the physician's surgical training, experience or performance to satisfy the College as to the physician's surgical skill.

Procedures shall be restricted to the anatomical areas for which physicians have been trained and approved. Those areas will be specified from the following list:

1. face
2. neck
3. arms
4. inner thighs
5. outer thighs
6. hips
7. flanks
8. abdomen
9. breasts (for fatty gynecomastia)
10. knew
11. calves and ankles

Practice Standards

The following requirements complement the College's *Non-Hospital Medical/Surgical Facilities Policy Manual*.

Physician Qualifications

All physicians who perform liposuction shall:

1. Hold privileges in liposuction approved by the College,

   and

2. Hold active certification in ACLS,

   or

   Perform this procedure only if a physician with current certification in ACLS or and anesthesiologist is immediately available and has privileges in the facility,

   and

3. Participate in mock drills for the management of life threatening emergencies related to the procedure at least every six months.

Qualification Requirements for Staffing

The College's position on staffing requirements in non-hospital facilities is as stated in the Operating Room Nurses Association of Canada (ORNAC) Recommended Standard and Guidelines.

The surgical patient in each theatre must be under the direct supervision of a perioperative Registered Nurse who is physically in each theatre and who is immediately available to respond to emergencies, i.e. Circulating role. Each procedure must be staffed by a **minimum** of two perioperative nurses who shall be trained and knowledgeable in the procedure liposuction, safe tumescent drug concentrations, fluid management and appropriate patient monitoring. The Scrub nurse role may be assigned to either a perioperative Registered Nurse or a Licensed Practical Nurse who has successfully completed an accredited operating room course.

If the scrub nurse role is **not** required for the procedure then the Circulating nurse role **must** be assigned to a perioperative Registered Nurse.

Documentation should clearly identify who provided direct patient care.

Post-operative Recovery

In addition to perioperative staff assigned to the OR theatre there must be a dedicated Registered Nurse in the recovery area who is appropriately trained, knowledgeable and skilled in monitoring vital signs, emergency procedures, fluid and electrolyte balance and awareness, and management of potential complications of tumescent anesthesia. The recovery nurse's sole responsibility must be to monitor the patient postoperatively until discharge.

Pre-Operative Evaluation

A pre-operative assessment shall be completed and recorded as contained in the *Non-Hospital Medical/Surgical Facilities Policy Manua*l. In addition:

1. Appropriate indications shall be recorded in the clinical record which may include:
    a. The removal of localized or regional deposits of adipose tissue for the purpose of body contouring;
    b. The treatment of specific conditions of adipose and subcutaneous tissues but shall not include the management of obesity.
2. Known contraindications shall be ruled out and their absence noted in the clinical record, including:
    a. Significant medical conditions that may be aggravated by surgery or anesthesia (emboli, thrombophlebitis, infectious diseases, poor wound healing, diabetes mellitus, prior abdominal surgery). Use of all medications, vitamins and herbs must be documented.
    b. Coagulopathies, with particular attention to medications that affect blood clotting, e.g. Aspirin, nonsteroidal anti-inflammatory agents, vitamin E, anticoagulants, herbal medications/remedies, and interactive drugs with lidocaine and epinephrine
    c. Medications that interact adversely with epinephrine and lidocaine.
    d. Local conditions of skin or subcutaneous tissue that make liposuction hazardous (e.g. certain scars, hernias and injuries)
    e. Significant skin laxity
    f. Morbid obesity
    g. Psychological contraindications such as mood disorders, thought disorders, severe anxiety, or unrealistic expectations.
    h. If indicated by history, complete blood cell count, platelet assessment, INR, chemistry profile including liver function tests, and pregnancy test for women of childbearing age.

Informed consent shall include the provision of written educational material and discussion with patient that includes the following:

1. The alternatives to liposuction
2. All usual and occasional side effects and complications

3. All potentially life-threatening complications
4. The possibility of a poor cosmetic outcome
5. The training and experience of the physician

Intraoperative Management

1. All solutions shall be prepared, labeled and signed by a qualified RN, physician or pharmacist, by aseptic technique, and from a written protocol.
2. In addition to the anesthesiologist or physician with ACLS, all nursing staff shall have current certification in basic cardiopulmonary resuscitation.
3. Intravenous access shall be initiated prior to the procedure and maintained throughout.
4. Infiltration and aspiration shall be performed by the physician with the privileges except where the College has approved another physician to perform infiltration of tumescent anesthesia solution.
5. The volume of subcutaneous solution infiltrated should equal the volume of aspirate 1:1.
    - Maximum safe dose of tumescent liposuction performed in non-hospital accredited facilities is Lidocaine 35 mg/kg.
    - Epinephrine dosage utilized in infiltrate solutions varies and may range from 1:100,000 to 1:1,000,000. Recommended that epinephrine doses not exceed 0.07 mg/kg.
    - Total aspirate should not exceed 5000 ml.
    - Regardless of the anesthetic route, large volume liposuction (greater than 5000 cc of total aspirate) should be performed in an acute-care hospital.
    - For liposuction as an adjunct to other procedures, it is suggested that there should be a maximum of 2000 cc's total aspirate volume.
    - Use warming blankets to preserve body core temperatures, sequential compression devices to prevent deep vein thrombosis and warming IV and infiltrate solutions to body temperature with approved devices.
6. Patients undergoing tumescent liposuction shall be continuously evaluated with at least the following:
    a. Visualization of some portion of the patient, other than the operative site, under appropriate lighting;
    b. Pulse oximeter with audible signal recognition;
    c. Apparatus to measure blood pressure.
7. In addition to the above, devices or drugs which shall be immediately available include:
    a. A stethoscope;
    b. A source of oxygen;
    c. A means of delivering positive pressure oxygen such as a self-inflating bag-value-mask device;
    d. An emergency resuscitation cart which includes:

- A cardiac monitor with defibrillator
- Endotracheal tubes, stylets, airways and face masks in a selection of sizes appropriate to the expected range of patient sizes and ages.
- Two functioning laryngoscopes and a variety of sizes of laryngoscope blades
- Magill forceps
- IV supplies and accessory equipment such as syringes, needles, ECG leads, sponges, tape, etc. These shall be stored in an orderly manner and be easily accessible
- Cricothyrotomy kit
- A backboard for CPR if the surgical chair/table or recovery stretcher are not suitable
- Emergency drugs as listed in the NHMSF Policy manual found on College website (www.cpsbc.ca)

Discharging the Patient

The facility shall comply with the College's standards for discharging patients after sedation or anesthesia (*Non-Hospital Medical/Surgical Facilities Policy Manual*).

Documentation of Care

The clinical records shall meet the College's standards for clinical records (see *Non-Hospital Medical/Surgical Facilities Policy Manual*). In addition, the clinical records shall contain:

1. The patient's pre-operative weight and height (BMI);
2. The volumes of tumescent fluid infused;
3. The volumes of intravenous fluid infused;
4. The volumes of fat and fluid extracted;
5. The size of the cannulas used;
6. The anatomical sites treated;
7. The use of external or internal ultrasonic techniques, if any;
8. The use of drains, if any;
9. Complications encountered, if any;
10. Post-operative garments used, if any;
11. Pre-operative photographs;
12. Post-operative photographs and weight at follow up;
13. Sequential compression devices; and
14. Body warming device

Quality Assurance

The outcomes of liposuction shall be monitored and recorded and made available for inspections by the College that include, but are not limited to:

1. Patient satisfaction;
2. Unexpected incidents;
3. Repeat procedures; and
4. Complications.

References

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[1] A satisfactory postgraduate training program in liposuction shall be given by preceptors with credentials acceptable to the College, and include:

a. The selection of procedures;
b. The preparation of patients;
c. Maintenance of asepsis in non-hospital settings;
d. Intra-operative patient monitoring;
e. Post-operative care and follow-up;
f. Quality improvement in surgical services; and
g. Hands-on training in the technique of tumescent liposuction