Sentinel Lymph Node Dissection 前哨淋巴結切除手術

Introduction

- Breast cancer may spread from the breast to involve the lymph nodes in the axilla.
- Sentinel lymph node is the first lymph node to receive lymph from the area of the breast.
- When tumour cells start to spread, the sentinel lymph node is the first to be affected.
- This operation can make a definite diagnosis for axillary lymph node metastasis. Further treatment of the axilla can be based on this result.
- Success rate of this procedure is >90%.
- In 5% of patients, there are metastasis in other axillary lymph node despite the sentinel lymph node does not contain metastasis.

Procedure

1. The operation is performed under general or local anaesthesia
2. A small dose of radioisotope, blue dye, indocyanine green (ICG), iron oxide or equivalent substance is injected around the tumour. This material is used to localize the sentinel lymph node
3. If radioisotope is used, lymphoscintigraphy may be performed
4. Incision is made in the skin crease in the axilla
5. If radioisotope is injected, a handheld gamma detector is used to localize the sentinel lymph node. For ICG and iron oxide, relevant detectors are used.
6. If blue dye is injected, sentinel lymph node is identified by its blue colour
7. All hot and/or blue lymph nodes are removed as specimen
8. Intraoperative frozen section may be done, axillary dissection may proceed if the result is positive
9. Wound closed with suture

Risks

A. Anesthesia related complications

General Anaesthesia

1. Cardiovascular complications: myocardial infarction or ischaemia, stroke, deep vein thrombosis, pulmonary embolism, etc.
2. Respiratory complications atelectasis, pneumonia, asthmatic attack,

exacerbation of chronic obstructive airway disease

3. Allergic reaction and shock

Local Anaesthesia

1. Local anaesthetic agents is injected around the site of operation
2. Toxicity of local anaesthetic agents may result in serious complications although rare

B. Procedural related complications (not all possible complications are listed)

Common procedure related complications

1. Wound pain
2. Wound infection
3. Bleeding (may require re-operation to evacuate the blood clot)
4. Hypertrophic scar and keloid formation may result in unsightly scar
5. Radioisotope carries a small amount of radioactivity. Potential harm to the human body is minimal. Most of the radioactivities will be removed with the specimen and residual activities left inside the body is minimal after the operation.
6. There is a rare possibility of hypersensitivity leading to anaphylaxis associated with the use of radiopharmaceuticals and blue dye.
7. If blue dye is used, discoloration of skin may persist.
8. If blue dye is used, urine may be stained green and this usually clears up in 2 days.
9. Lymphoedema (though possible but much less compared with axillary dissection)
10. Nerve injury including long thoracic nerve, thoracodorsal nerve and rarely brachial plexus(though possible but much less compared with axillary dissection)
11. Injury to the vessels(though possible but much less compared with axillary dissection)
12. Frozen shoulder and chronic stiffness (though possible but much less compared with axillary dissection)
13. Numbness over axilla (though possible but much less compared with axillary dissection)
14. Seroma collection (though much less compare with axillary dissection)

Preoperative preparation

1. Procedures are performed as elective operation
2. Admit 1 day before or on same day of operation
3. Anaesthetic assessment before procedure if scheduled for general anaesthesia
4. Keep fast for 6 to 8 hours before operation if scheduled for general anaesthesia
5. Patient may need to go to X-Ray Department for preoperative imaging and localization with the injection of isotope. Lymphoscintigraphy may be needed
6. Change to operation room uniform before transfer to operating room
7. May need pre-medications and intravenous drip
8. Antibiotic prophylaxis or treatment may be required
9. Inform your doctors about drug allergy, your regular medications or other medical conditions

Postoperative events

Usually after operation

1. May feel mild throat discomfort or pain because of intubation
2. Mild discomfort or pain over the operative site. Inform nurse or doctor if pain severe.
3. Nausea or vomiting are common if general anaesthesia is employed; inform nurses if severe symptoms
4. Inform nurses if more analgesics are required
5. Usually go home on same day or the day after the operation

Wound care

1. In the first day after operation, patients can have shower with caution (keep wound dressing dry)
2. Stitches or skin clips (if present) will be taken off around 10-14 days

Diet

1. Resume diet when recover from anaesthesia

Things to take note on discharge

1. Contact your doctor or the Accident & Emergency Department for the following events occurs
    - increasing pain or redness around the wounds

- discharge from the wound

2. Take the analgesics prescribed by your doctor if required
3. Resume your daily activity gradually (according to individual situation)

4. Remember the dates of taking off stitches/clips in the clinic, and follow-up in the specialist clinic

Further management

Further surgical operation may be scheduled after the pathology of sentinel lymph nodes is available. Adjuvant therapy such as chemotherapy, hormonal therapy, target therapy and radiotherapy may be necessary according to the final pathology and will be advised by the doctor once this is available after the operation.

Recurrences

Despite surgical clearance of the cancer, there is still a chance of recurrence of the disease and death. This is dependent on the initial stage of disease at the time of presentation and subsequent progression.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor.