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Case Report

Radical Mastectomy under Lumbar Spinal Anaesthesia

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Abstract

Spinal Anaesthesia Technique required for Radical Mastectomy is the same as routine spinal anaesthesia. The table tilt should be head low 15°—20° (Kotwal Tilt), diseased side should be dependent (e.g. left lateral for left radical mastectomy) L3—L4 space.

- Spinal needle no. 25—27
- Very gradual administration of 0.5% Bupivacaine (Sensorcaine) > 2 mins at least.

Keywords: Spinal Anaesthesia, Radical Mastectomy, Kotwal Tilt, Regional anesthesia

1. Introduction

There are various studies comparing thoracic or segmental spinal with General Anaesthesia. This is a unique technique of radical mastectomy under spinal Anaesthesia using traditional lumbar approach. Emphasis has to be made on the convenience, safety, less complications, reduced morbidity over general Anaesthesia. Author is a freelance Anesthesiologist (private practitioner) at a town place with limited resources hence this procedure aids in better patient care. In the present era of regional Anaesthesia this appears to be a promising technique and choice of Anaesthesia.

2. Case Report

Routine screening:

- Pre anesthetic work-up (CBC, Blood Group, Blood Sugar, Serum Creatinine, Urine (Routine), X-Ray Chest, ECG & Echocardiography, C.T scan if needed.)
- Preloading as per status of patient with Crystalloids, commonly 500ml to 1000 ml except few high risk cases.

Premedication:

- Inj Ranitidine 50 mg
- Inj Ondansetron 4 mg.
- **Table is tilted head low about 15°—20°(Kotwal Tilt)** position for spinal with diseased side dependent (e.g. left lateral for left radical mastectomy)
- Spinal Anaesthesia is administered in **L3—L4** space with lumbar puncture needle no**. 25—27** size, preferably B.D. Atraumatic needle.
- Drug administered is **0.5% Bupivacaine** (Sensorcaine, Anawin).
- **Drug is given very slowly over a period of 2-2.5 mins**.
- Table tilt is corrected and patient turned supine.
- Level of Anaesthesia, Analgesia achieved uptoT2.intraop Spo2, B.P., pulse, respiration, and if required ECG monitoring is done.

3. Results

Bilaterally effective Anaesthesia, analgesia is achieved upto T2. Single dose is effective bilaterally. Minimum bleeding was observed. The patient complains of no post-operative nausea or vomiting. Also, prolonged postoperative analgesia seen.

3.1 Application

This is a very safe, convenient, cost effective technique of Anaesthesia for radical mastectomy **provided all the due care and advised instructions are followed.**
Patients from ASA1---ASA 4 Category can be managed under this technique efficiently.

3.2 Probable Complications:

- Only concern is muscle twitching with cautery when axillary dissection is done due to heat conduction and direct neuronal stimulation which can be taken care of by local spraying of Xylocard/Xylocaine if needed after axillary exploration.
- Minimal sedation like 0.5 mg fused (Midazolam) or Inj. Butrum (Butorphenol) 0.3 mg or Inj Ketmin 10 mg may

be supplemented, if the patient has apprehension and anxiety.
- Bradycardia
- Hypotension
- Post spinal headache
- Dermatome missing or patchy Anaesthesia may be noticed.

All the above complications can be tackled as per encountered in routine spinal anaesthesia.

4. Discussion

Radical Mastectomy under Spinal Anaesthesia is a simple, safe and **cost effective** technique. In the present era of regional Anaesthesia, this can be very well practiced.

Strength:
- No special skills are required as the procedure is identical to routine spinal anaesthesia
- Can be very well practiced at periphery with minimal facilities.
- No absolute contraindications except those for routine Spinal Anaesthesia.
- Reduced intra operative and postoperative complications.
- Reduced morbidities
- Along with patient benefits, surgeon satisfaction and comfort.

5. Limitation

- Absolute contraindications those for routine Spinal Anaesthesia.
- Dermatome missing or patchy Anaesthesia may be noticed.

6. Summary

Points to be noted
- Preloading
- Kotwal tilt.
- Spinal needle no.25-27
- L3—L4 Space
- Very slow administration of drug > 2 mins.
- Please don't try to give spinal at higher level as there is every chance of damaging the cord sooner or later.

Author's Experience

- Author has done over 372 cases till March 2016 since last 16 years.
- None of the patient needed conversion to G.A. analgesia and Anaesthesia was adequately achieved upto T2.
- Patients were able to move fingers in all cases.
- There was not a single event of respiratory grunting or high spinal leading to respiratory difficulty or refractory hypotension.

Kotwal Tilt

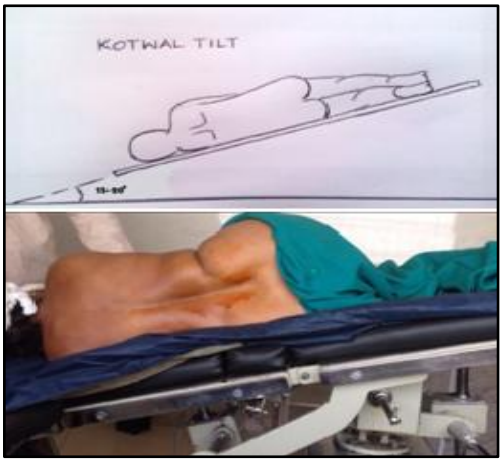

Figure 1: **Kotwal Tilt**

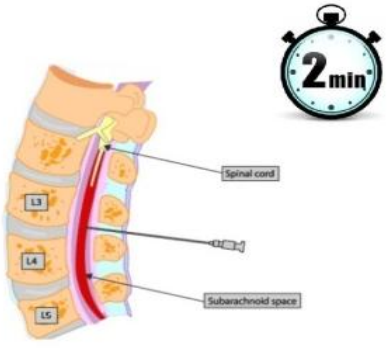

Figure 2

Video

https://youtu.be/sKs9ijUz2tM

Review of Literature and references

As there is no study of radical mastectomy using lumbar approach no references are available for comparison.