

Anaesthesia Management for Carcinoma Right Breast with Brain, Lung and Liver Metastasis, Posted for Prophylactic Laparoscopic Oophorectomy under Spinal Anaesthesia

Arunseth C¹, Sujatha MP²

How to cite this article:

Arunseth C, Sujatha MP. Anaesthesia Management for Carcinoma Right Breast with Brain, Lung and Liver Metastasis, Posted for Prophylactic Laparoscopic Oophorectomy under Spinal Anaesthesia. Ind J Anesth Analg. 2024; 11 (2) 95-98.

Abstract

Introduction: Prophylactic Bilateral Oophorectomy is procedure for carcinoma breast patients with brain, liver and lung metastasis. We report successful anaesthetic management of case of Post-operative case of right modified radical mastectomy (for CA breast) with secondaries in lung, Brain and liver with post radiotherapy and chemotherapy now posted for Prophylactic Laparoscopic bilateral Oophorectomy. The anaesthetic management of this case was challenging because of complications associated with metastasis.

Case Report: In this case we present a 25 year old female Post Operative case of carcinoma right breast with brain, lung and liver metastasis, Patient received 25 cycles of chemotherapy and 3 cycles of chemotherapy. Patient now posted for Prophylactic Laparoscopic Bilateral Oophorectomy. Pre-anaesthetic evaluation done, and patient underwent Prophylactic Laparoscopic Bilateral Oophorectomy under Spinal Anaesthesia without any intraoperative complication. Patient got discharged under stable condition on POD 3. Patient followed up later for further Chemotherapy.

Conclusion: This is an original Case Report, which provide a successful management of anaesthesia of a laparoscopic Bilateral Oophorectomy Under Spinal Anaesthesia.

Keywords: Anaesthesia; Ca breast; Metastasis; Prophylaxis; Oophorectomy.

Key Messages: Breast cancer is the most commonly diagnosed cancer worldwide. Breast cancer mortality rates have been decreasing since the 1970s. This decrease in mortality is due to improved breast cancer screening and improvements in adjuvant therapy. Prophylactic Bilateral Oophorectomy is procedure in carcinoma breast patients to start chemotherapy.

Author's Affiliation: ¹Second Year Postgraduate, ²Professor, Department of Anaesthesiology, Sri Devaraj Urs Medical College, Kolar 563101, Karnataka, India.

Corresponding Author: Sujatha MP, Professor, Department of Anaesthesiology, Sri Devaraj Urs Medical College, Kolar 563101, Karnataka, India.

E-mail: drsujathamp@yahoo.co.in

Received on: 30.12.2023

Accepted on: 08.02.2024

INTRODUCTION

Prophylactic Bilateral Oophorectomy is procedure for carcinoma breast patients is done for patients with brain, liver and lung metastasis. We report successful anaesthetic management of case of post-operative Right modified radical mastectomy (for CA breast) with secondaries in lung, brain and liver now posted for Prophylactic laparoscopic bilateral



oophorectomy. The anaesthetic management of this case was challenging because of complications associated with metastasis.

CASE REPORT

A 25 year old Post-operative Case of Carcinoma Right Breast with Brain, Lung and Liver Metastasis, Posted for Prophylactic Laparoscopic Bilateral Oophorectomy came with weakness of left upper limb and lower limb one month back, and cough and hoarseness of voice since one Month. She gives no history of any known co morbidities.

Her CT lung showed¹ Multiple round well circumscribed soft tissue attenuated lesions of variable size noted in bilateral lungs, largest one measuring 14*13mm² Collapse consolidation of lingular segment of upper lobe. Her CT brain shows¹ Heterogenous lesion in the left occipital region with perilesional oedema,² Mass effect in the form of effacement of the left lateral ventricle and midline shift towards right side for a distance of 8mm³ Small area of gliosis in the right appearance. Saturation was 90% on room air. After discussing with obstetrician, oncology team temporal region.



Fig. 1: CXR showing metastasis

USG of liver showed: Hypoechoic poorly defined lesion of size 7 mm. Patient was conscious and oriented. All her blood investigations were within normal limits. A 12 lead ecg was done and which shows heart rate 80 beats per minute, sinus rhythm. Chest x-ray shows cannon ball and patient, we planned to administer spinal anaesthesia with a back up plan of general anaesthesia.

The patient was explained about the spinal anaesthesia and consent was taken. Tab Alprazolam 0.5mg and Tab ranitidine 150mg was given on the previous night and morning at the day of surgery. Nil per oral is maintained for 8 hours before surgery. The plan was to operate the patient under spinal anaesthesia view of lung metastasis. 18 gauge intravenous cannula was secured and pre loading was done using ringer lactate. A 5 lead electrocardiogram, pulse oximeter and non invasive blood pressure monitoring was done. Basal vitals noted. HR- 80 Beats/minute , NIBP- 120/70mmhg, SPO2-90. Patient was supplemented with oxygen via facemask at 5 ltrs/min following which SPO₂ increased to 100. Under strict aseptic precautions parts were painted and draped, L3 L4 space was identified using anatomical landmark technique and using 25 gauge Quincke's needle lumbar puncture done. After confirming free back flow of CSF and negative aspiration of blood. 3.8ml of Inj Bupivacaine 0.5% heavy and inj Buprenorphine 60 micrograms was given. Block achieved till T6 level. Surgery lasted for almost 2 hours and intra operative vitals were stable. Patient shifted to recovery room and was under observation for an hour. Patient was then shifted to post-operative ward. Post operative period was uneventful.

DISCUSSION

Breast cancer is the most commonly diagnosed cancer worldwide. Breast cancer mortality rates have been decreasing since the 1970s. This decrease in mortality is due to improved breast cancer screening and improvements in adjuvant therapy.

Clinical features

The diagnosis of breast cancer requires histologic evaluation. Most patients present due to an abnormal mammogram. Some women are diagnosed with breast cancer due to the presence of a breast mass that is not detected on mammogram. May also present with a breast or axillary mass with or without skin changes.

Breast mass – The “classic” characteristics of a cancerous lesion include a hard, immovable, single dominant lesion with irregular borders.

Skin findings such as erythema, thickening, or dimpling of the overlying skin (peaud'orange), suggesting inflammatory breast cancer.

Metastatic disease – Symptoms of metastatic breast cancer depend on the organs involved, with the most common sites of involvement being

the bone (eg, back or leg pain), liver (abdominal pain, nausea, jaundice), and lungs (eg, shortness of breath or cough).

Imaging findings – Classic mammographic findings of breast cancer include the presence of a soft tissue mass and grouped microcalcifications. The most specific feature is a spiculated, high-density mass, with nearly 90 percent representing an invasive cancer.

Breast ultrasound is often used to distinguish a benign versus malignant lesion. Sonographic features of malignancy include hypoechogenicity; internal calcifications; shadowing; a lesion taller than it is wide; and spiculated, indistinct, or angular margins.

Magnetic resonance imaging (MRI) is typically used to screen women at high risk for breast cancer. MRI features of breast cancer include irregular or spiculated mass margins, heterogeneous internal enhancement, and enhancing internal septa.

Staging: Primary tumor classification:

- Tx – Primary tumor is unable to be assessed.
- T0 – No evidence of primary tumor.
- Tis – Carcinoma in situ.
- Tis (DCIS) – Ductal carcinoma in situ.
- Tis (Paget) – Paget disease of the nipple not associated with invasive carcinoma and/or DCIS in the underlying breast parenchyma. Carcinoma in the breast parenchyma associated with Paget disease is categorized based on the size and characteristics of the parenchymal disease, although the presence of Paget disease should still be noted.
- T1 – Tumor ≤ 20 mm in greatest dimension.
- T1mi – Tumor ≤ 1 mm in greatest dimension.
- T1a – Tumor >1 mm but ≤ 5 mm in greatest dimension (round any measurement 1.0 to 1.9 mm to 2 mm).
- T1b – Tumor >5 mm but ≤ 10 mm in greatest dimension.
- T1c – Tumor >10 mm but ≤ 20 mm in greatest dimension.
- T2 – Tumor >20 mm but ≤ 50 mm in greatest dimension.
- T3 – Tumor >50 mm in greatest dimension.
- T4 – Tumor of any size with direct extension to the chest wall and/or the skin (ulceration or macroscopic skin nodules).
- T4a – Extension to chest wall, not including only pectoralis muscle adherence/invasion.
- T4b – Ulceration and/or ipsilateral satellite nodules and/or edema (including

peaud'orange) of the skin, which do not meet the criteria for inflammatory carcinoma.

- T4c – Both (T4a and T4b).
- T4d – Inflammatory carcinoma.

Treatment: Surgical - Modified radical mastectomy
Chemotherapy-paclitaxel, cyclophosphamide, tamoxifen.

Radiotherapy: Suppression of ovarian estrogen production reduces the recurrence of hormone-receptor-positive early breast cancer in premenopausal women. The role of oophorectomy in the treatment of breast cancer is known for over 100 years. Thomas William Nunn was the first to report a relationship between ovarian function and breast cancer when he described regression of breast cancer in a woman 6 months after she attained menopause. German surgeon was the first to propose oophorectomy as a treatment for breast cancer but he never performed the surgery himself. George Thomas Beatson was the first person to perform a bilateral oophorectomy on a woman with breast cancer in 1895. He reported on three patients in the Lancet in 1896. A subsequent report indicated that one patient survived 4 years after the surgery. The procedure never became popular because of the associated high morbidity in the early 20th century.⁵

Role of Anaesthesia: Laparoscopic abdominal surgery is conventionally done under general anesthesia. Spinal anesthesia is usually preferred in patients where general anesthesia is contraindicated.⁴ The advantages of a uniform total muscle relaxation, a conscious patient, and relatively uneventful recovery after spinal anesthesia on the one hand and the protection from potential complications of general anesthesia on the other, were the main reasons for selecting spinal anesthesia as the first choice.

REFERENCES

1. Major AL, Jumaniyazov K, Yusupova S, Jabbarov R, Saidmamatov O, Mayboroda-Major I. Laparoscopy in Gynecologic and Abdominal Surgery in Regional (Spinal, Peridural) Anesthesia, the Utility of the Technique during COVID-19 Pandemic. *Medicines (Basel)*. 2021 Oct 19;8(10):60.
2. Major AL, Jumaniyazov K, Yusupova S, Jabbarov R, Saidmamatov O, Mayboroda-Major I. Removal of a Giant Cyst of the Left Ovary from a Pregnant Woman in the First Trimester by Laparoscopic Surgery under

- Spinal Anesthesia during the COVID-19 Pandemic. *Med Sci (Basel)*. 2021 Nov 13;9(4):70.
3. Chung MK, Chung RP. Laparoscopic extracorporeal oophorectomy and ovarian cystectomy in second trimester pregnant obese patients. *JSLs*. 2001 Jul-Sep;5(3):273-7.
 4. Sinha R, Gurwara AK, Gupta SC. Laparoscopic surgery using spinal anesthesia. *JSLs*. 2008 Apr-Jun;12(2):133-8.
 5. Francis PA, Regan MM, Fleming GF, et al. Adjuvant ovarian suppression in premenopausal breast cancer. *N Engl J Med*. 2015;372(5):436-46.

