

Breast Conservation Surgery Vs Modified Radical Mastectomy Among Women with The Localised Breast Cancer

Dr.Rahul D Parmar

(3rd year resident), Under guidance of

Dr. Yogendra Modi(prof.), Dr.Sushil Akruwala (Prof), Dr.Urvish Shah

Department of general surgery, GCS medical college and research centre

Abstract

BCS is preferred in developed countries and MRM is preferred in developing countries For this observational study we reviewed the records of all the female patients in the database who were newly diagnosed with invasive carcinoma of breast from November 2021 to April 2022 (6 months).

Materials and methods:

We retrospectively reviewed data for 25 patients with Ca breast who underwent BCS, MRM from November 2021 to April 2022 (6 months). The patients are divided into 3 groups

- A: BCS operated patient
- B: MRM operated patients
- C: BCS then finally MRM operated patients based on frozen section report

We compared operation duration, blood loss, post operative complications and hospital stay and morbidity among 3 groups.

Results:

- The blood loss volume in Group A was significantly less than that of group B&C.
- The median operation duration was larger in Group C than Group A and B.
- More tissue damage leads to more inflammatory response causing seroma and wound gap and skin margin blackening in Group B&C. so more post operative hospitalization.

Conclusion:

- BCS is better than MRM in terms of post operative morbidity, better cosmetically and in future breast reconstruction is possible.

Introduction

- Breast cancer is the most common cancer affecting women.
- Developed countries have higher incidence rates and better survival rates of breast cancer than developing countries.
- Due to routine screening and early presentation, Breast Conservation Surgery has become the preferred surgical option for the management of patients with non metastatic breast cancer in developed countries.
- In contrast, in developing countries, lack of awareness, population screening and poor access to healthcare system, patients have a delayed presentation, modified radical mastectomy became a preferred option.
- Since last two decades breast cancer awareness increased in developing countries like India due to population screening and government health programmes.
- In India physical retrieval of patient records is often problematic and time consuming for clinicians.
- In our hospital we developed standard approach to breast cancer diagnosis (triple assessment), treatment and follow up weekly and monthly oncology camp attended by surgeons, medical oncologists and healthcare workers.
- For this observational study we reviewed the records of all the female patients in the database who were newly diagnosed with invasive carcinoma of breast from November 2021 to April 2022 (6 months).
- Study pointed at better survival and cosmetic outcome in BCS compared with mastectomy.

Aims and Objectives

- To observe the outcome of post BCS and post MRM in a view of intra op as well as post operative complications.
- The following factors are accounting before conclusive outcome:
 - 1)Patient's characteristics and pathological features of tumour
 - 2)Operative time intra op bleeding and frozen section
 - 3)Post operative complications

Material and Methods

- Data consists of primary data collected by the principal investigator directly from the patients who were admitted from OPD in the GCS Medical College and hospital.
- It was observational study for a period of six months from November 2021 to April 2022 under sample size was 25 cases.

Inclusion criteria

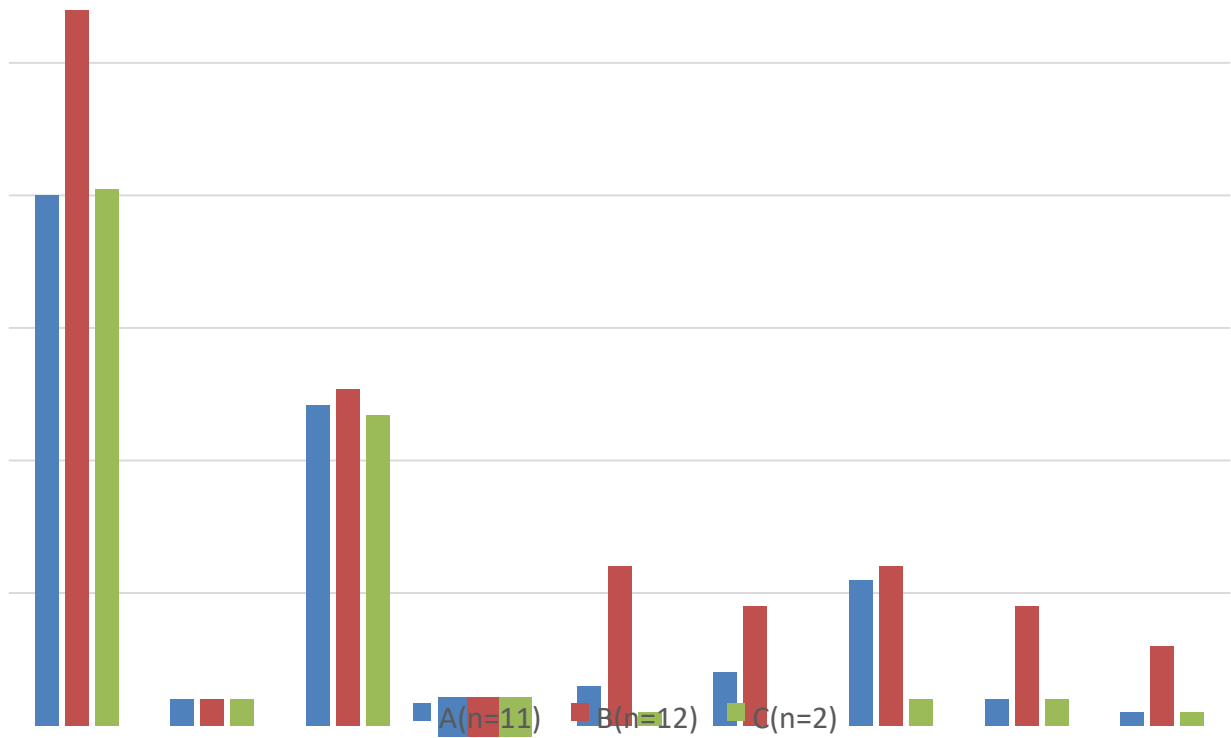
- Clinical symptoms, signs and images consistent with the diagnosis of primary operable invasive breast cancer.
- More than 18 years of age and less than 70 years of age
- Probability of satisfactory cosmetic outcome by excision of the tumour bearing part of the breast
- Tumor confined to one breast and no signs of multifocally by palpation or mammography

Exclusion criteria

- Metastatic or disseminated disease determined by clinically, chest and other body x-rays, USG abdomen and bone scans.
 - Clinically stage 3B and four breast cancer history of previous malignancy
 - Patient who declined surgery
 - Patients who do not give consent for study
- In our study around 25 patients satisfying the above inclusion and exclusion criteria were selected, of which they were divided into three groups based on surgery and frozen section reports
 - Group A: BCS operated patient
 - Group B: MRM operated patients
 - Group C: BCS then finally MRM operated patients based on frozen section report
 - Patients were prepared for the general anaesthesia and performed the procedure of BCS or MRM.
 - In BCS patient tumor within breast tissue removed and sent for frozen section. In MRM entire breast specimen with axillary lymph nodes removed.
 - If frozen section margin positive, then BCS converted to MRM and entire breast tissue with the lymph nodes removed and sent for HPE.
 - All operations were performed by experienced surgeons, all patients underwent pre operative examinations and patients with contraindications were excluded. All patients provided written and informed consent.

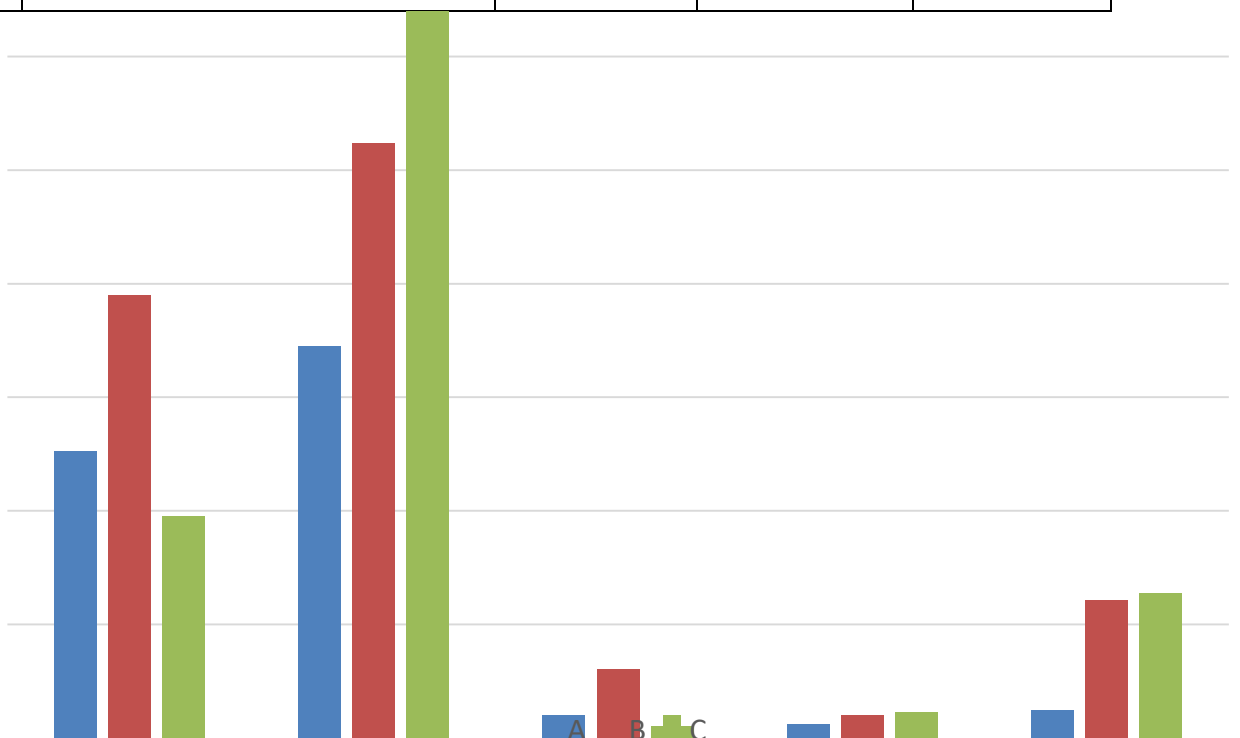
OBSERVATION AND RESULTS**TABLE 1 PATIENT CHARACTERISTICS OF 3 GROUPS**

1	AGE	39.90 ± 10	54.25 ± 20	40.5 ± 10
2	NO. OF CHILDREN	2 ± 1	2 ± 2	2 ± 1
3	BMI	24.2 ± 2.4	25.4 ± 2.6	23.4 ± 2.1
4	TUMOUR SIZE (CM)	2.2 ± 0.8	3.1 ± 1.5	2.4 ± 0.3
5	AXILLARY LYMPHNODE	3(1 LN)	12(2.4 ± 2)	1(1 LN)
6	COMORBIDITIES(DM,HTN,THYROID,H IV) 1 SINGLE MORBIDITY =1 MORE THAN 1 MORBIDITY =2	4(1)	9(1.44 ± 1)	0
7	HISTOLOGY TYPE A. INVASIVE DUCTAL CARCINOMA=1 B. OTHER OR MIXED CARCINOMA = 2	9(1+1) 2(2)	11(1+1) 1(1)	2(1) -
8	NO. OF LYMPHNODE POSITIVE	2(1 LN)	9(2.4 ± 1.1)	2(1 LN)
9	LYMPHOVASCULAR INVASION	1	6	1



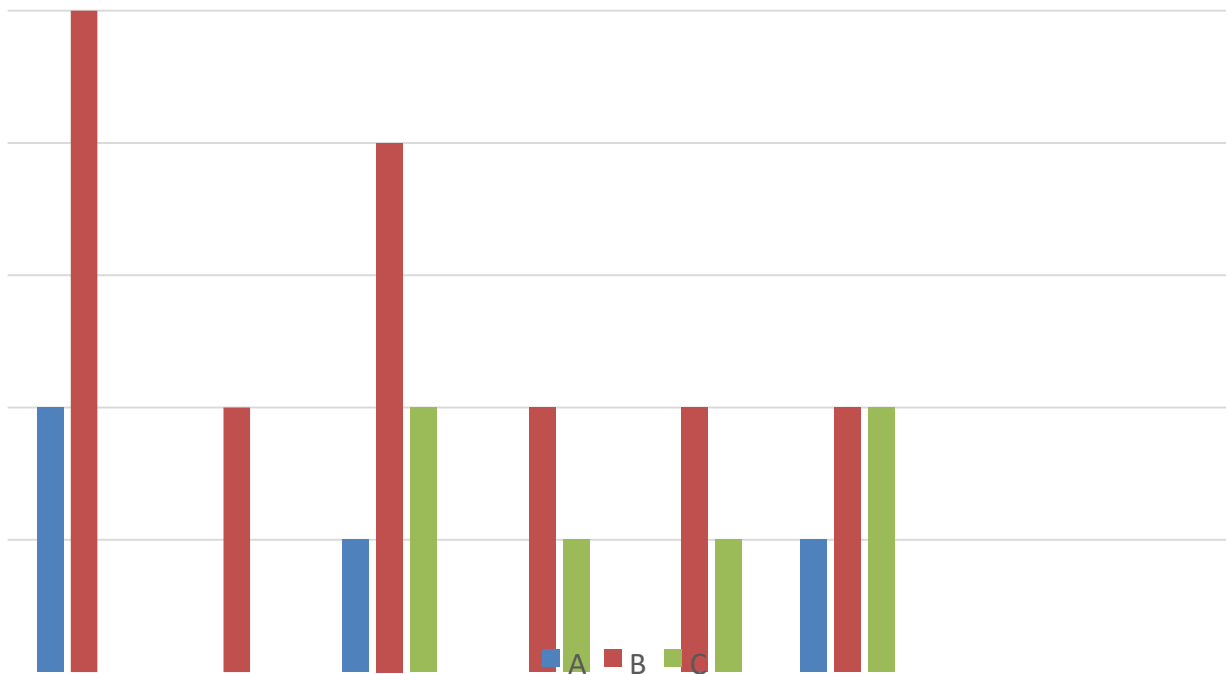
OPERATIVE OUTCOME AMONG 3 GROUPS

1	OPERATION DURATION (MIN)	50.45(42-59)	77.91(70-85)	39(38-40)
2	BLOOD LOSS VOLUME(ML)	68.9(+_ 20 CC)	104.6 CC(+_22 CC)	128+_12 CC)
3	DRAINAGE TUBE PLACEMENT(N%)	4(44%)	12(100%)	2(100%)
4	POST OP HOSPITALIZATION DAYS	2.45(+_ 1DAY)	3.91(+_2 DAYS)	4.5 (+_1 DAY)
5	SCAR MARKS	4.81(4-6 CM)	24.2 CM(20-26 CM)	25.5 CM(24-27 CM)



POST OPERATIVE COMPLICATIONS AMONG 3 GROUPS

1	BLEEDING(HEMATOMA)	2(12%)	5(40%)	0
2	SEROMA	0	2(12%)	0
3	INFECTION	1	4	2
4	WOUND GAP	0	2	1
5	SKIN MARKING BLACKNING	0	2	1
6	SCAR TISSUE < 5 CM =1 >5 CM = 2	1	2	2





BCS



BCS



BCS



Discussion

- Early presentation after diagnosis with Ca breast is important to reduce the risk of surgical and wound related complications.
- We divided 25 patients into three groups A,B&C according to the types of surgery.
- In both BCS and MRM increased morbidity and surgical complication is independent of age and number of children of patients.
- The blood loss volume in Group A was significantly less than that of group B&C.
- The median operation duration was larger in Group C than Group A and B.
- Widespread of cancer, extensive surgical procedure causes more tissue damage and causes increased blood loss volume in Group C and B.
- More tissue damage leads to more inflammatory response causing seroma and wound gap and skin margin blackening in Group B&C . so more post operative hospitalisation.
- In Group A significantly less operative duration due to more localised tumour. so less dissection and less inflammation.
- This observation study Has shown a higher risk of morbidity and stich line related complications in MRM compared to BCS.
- BCS have two disadvantages
 - A) if margin positive, then procedure converted to MRM and more morbidity increase.
 - B) BCS patient undergo post operative radiotherapy
- Patient is going through an attempt of BCS prior to MRM has considerable better outcome.

Conclusion

- We recommend BCS over MRM in early stage breast cancer which can significantly decrease operative time, blood loss and post operative complications.
- In addition BCS is cosmetically superior. So less scar formation and better for emotionally and psychologically to the patient. In future breast reconstruction is possible.
- Only disadvantage is BCS operated patient must go for RT.

References

1. SABISTON TEXTBOOK OF SURGERY 21ST EDITION CHAPTER 36 PAGE 857 , BREAST RECONSRTRUCTION.
2. SABISTON TEXTBOOK OF SURGERY 21ST EDITION CHAPTER 35 PAGE 837, DISEASES OF THE BREAST
3. BAILEY AND LOVE'S SHORT PRACTICE OF SURGERY 27TH EDITION CHAPTER 53 –PAGE 876,877 ;THE BREAST
4. SCHWARTZ'S PRINCIPLE OF SURGERY 11TH EDITION VOLUME-1 CHAPTER-117 PAGE 591,THE BREAST
5. VERONESI U, CASCINELLI N,MARIANI L. ET AL THIRTY YEAR FOLLOW UP OF RANDOMIZED STUDY COMPAIRING BREAST CONSERVATING SURGERY WITH RADICAL MASTECTOMY FOR EARLY BREAST CANCER, N ENG MED 2002;347:12271232

Abbreviation

- CM-CENTIMETER • MRM-MODIFIED RADICAL MASTECTOMY • MIN-MINUTE • ML-MILILITER • BCS-BREAST CONSERVATIVE SURGERY • RT-RADIO THERAPY • ICG-INDOCYANINE GREEN • OPD-OUTDOOR PATIENT DEPARTMENT THANK YOU