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Effect of Balance and Core Strengthening Exercises on Falls Activities of Daily Living (ADL) and Quality of Life in Geriatric Patients After Bariatric Surgeries

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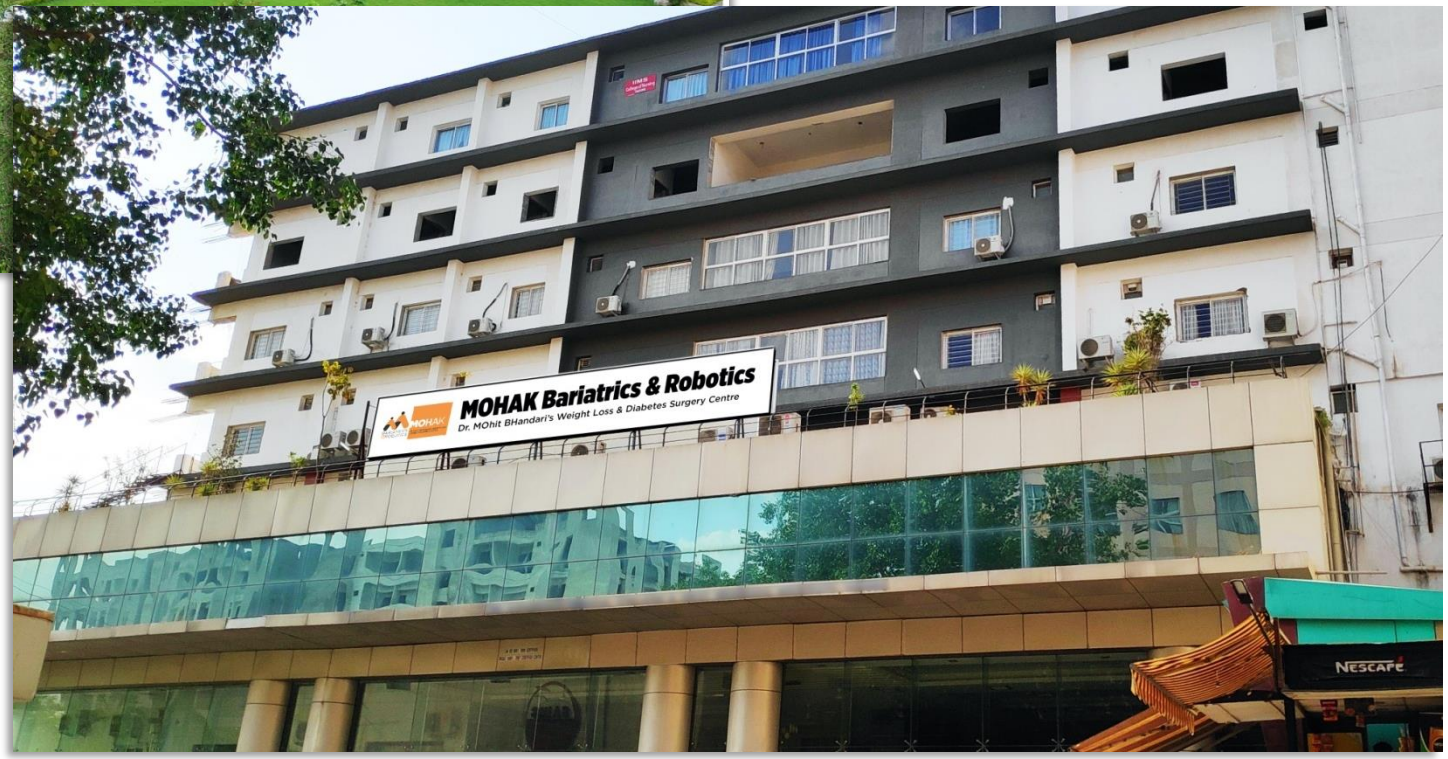
VISION WITH ACTION

← INDORE, INDIA

MOHAK BARIATRIC AND ROBOTIC SURGERY CENTER INDORE, INDIA (MBRSC)

MOHAK
BARIATRICS ROBOTICS WEIGHT LOSS & DIABETES SURGERY CENTRE



DISCLOSURE

Mohit Bhandari MD

Consultant to:

- Johnson and Johnson
- Medtronic
- Bariatric Solution
- Intuitive Surgical
- Karl Storz
- Stryker
- Apollo Endo-surgery
- Pentax
- Olympus

Winnie Mathur

- None

Mathias Fobi MD FACS, FICS, FACN

- Founding President, Bariatec Corporation

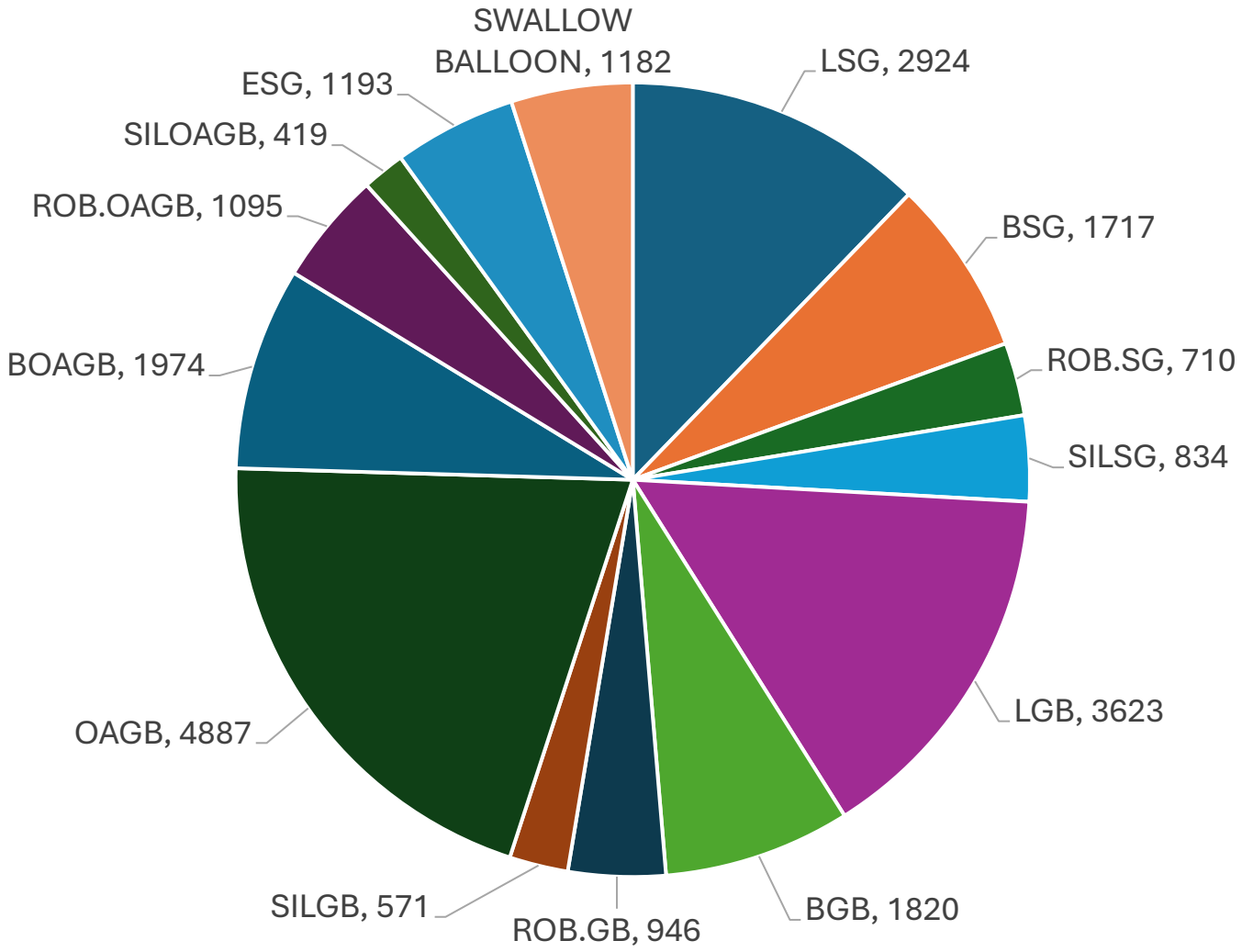
Manoel Galvao Neto

- Director Bariatric Endoscopy

BARIATRIC PROCEDURES MIX DISCLOSURES MBRSC
January 2010 – July 2024

CASE MIX DISCLOSURE
2010- 2024

TOTAL	25400
LSG	6185
LGB	6960
OAGB	8375
ESG	1193
SWALLOW BALLOON	1182
Other	1505



Introduction

- Obesity is a significant and growing global health issue**, particularly affecting older adults**. It increases the risk of numerous health problems, including diabetes, cardiovascular disease, and reduced mobility.
- Bariatric surgeries, such as SG, RYGB and OAGB, are commonly performed to achieve substantial weight loss in morbidly obese individuals. These surgeries often lead to significant improvements in overall health and obesity-related conditions.

After bariatric surgery, patients, especially the elderly, face specific challenges, including a higher risk of falls, decreased functional independence, and a diminished quality of life.

Importance of Postoperative Care

- Effective postoperative care is crucial for addressing these challenges and ensuring optimal recovery and quality of life.
- Exercise programs targeting balance and core strength may play a vital role in improving outcomes for these patients.

Need for Targeted Interventions

- There is a need for structured and targeted interventions to address falls, enhance daily functioning, and improve overall well-being in geriatric patients' post-bariatric surgery.

This study explores the impact of interventions……
(12-week structured exercise program focusing on balance and core strengthening.)

Aim and Objectives

The aim of this study was to determine whether a structured exercise program focused on balance and core strengthening could reduce the incidence of falls, improve activities of daily living (ADLs), and enhance the overall quality of life in geriatric patients after bariatric surgeries.

Evaluate Fall Incidence:
To assess whether a 12-week balance and core strengthening exercise program can significantly reduce the incidence of falls in geriatric patients following bariatric surgery.

Improve Activities of Daily Living (ADLs):
To determine if the same exercise program can enhance the independence and performance of daily activities in these patients.

Enhance Quality of Life:
To investigate whether participation in the exercise program leads to a measurable improvement in the overall quality of life and well-being of geriatric patients' post-bariatric surgery.

Methodology

- **Sample Size:** 148 geriatric patients aged 65 and above.
- **Inclusion Criteria:** Patients who had undergone bariatric surgery at the high-volume center.
- **Exclusion Criteria:** Patients with contraindications to exercise or other serious health conditions.

- **Intervention Group:** Received a 12-week structured exercise program focusing on balance and core strengthening.
- **Control Group:** Received usual care without the additional exercise program.

Intervention Details

- **Program Duration:** 12 weeks.

- **Exercise Components:**
  - **Balance Exercises:** Targeting static and dynamic balance.
  - **Core Strengthening Exercises:** Focused on improving core stability and strength.

- **Frequency:** Three sessions per week, each lasting 60 minutes

- **Supervision:** Led by trained physiotherapists or exercise specialists.

Data Collection

- **Baseline Measurements:** Collected prior to the intervention to assess initial fall rates, ADL performance, and quality of life.
- **Follow-Up Measurements:** Reassessed at the end of the 12-week intervention period.
- **Instruments Used:**
  - **Falls:** Self-reported falls and fall incidents recorded during the study period.
  - **ADLs:** ADL performance measured using a validated scale (Katz Index of Independence in Activities of Daily Living).
  - **Quality of Life:** Assessed using a standardized questionnaire (SF-36).

Patient Demographic

Demographic Variable	Range	Mean	Number of Patients
Age	65 to 85 years	72 years	148
Gender	Male: 40%, Female: 60%	-	Male: 59, Female: 89
Height	150 cm to 180 cm	165 cm	-
Weight	90 kg to 130 kg	105 kg	-
BMI	30 to 45 kg/m²	36 kg/m²	-

Falls: Self-reported

Group	Number of Falls	Reduction (%)
Control Group	40	-
Intervention Group	28	30% reduction

The reduction in falls achieved by the intervention.

ADL performance

Group	Baseline ADL Score (Mean)	Post-Intervention ADL Score (Mean)	Improvement (%)
Control Group	4.5	4.6	2.2%
Intervention Group	4.5	5.4	20%

ADL performance improvements for both the control and intervention groups, highlighting the significant increase in ADL independence in the intervention group.

Quality of Life using the SF-36

Group	Baseline SF-36 Score (Mean)	Post-Intervention SF-36 Score (Mean)	Improvement (%)
Control Group	50	52	4%
Intervention Group	50	60	20%

Quality of Life scores, showing the baseline and post-intervention scores for both the control and intervention groups, along with the percentage improvement observed in each group.

Conclusions

- The structured balance and core strengthening exercise program led to a significant 30% reduction in falls among geriatric patients post-bariatric surgery.
- Participants in the intervention group showed a notable 20% increase in independence in activities of daily living (ADLs), as measured by the Katz Index.
- The intervention group reported a 20% improvement in quality of life scores (SF-36), indicating better overall well-being and satisfaction with life.
- The findings highlight the importance of incorporating tailored exercise programs as part of postoperative care to address specific challenges faced by geriatric patients after bariatric surgery.
- Structured balance and core strengthening exercises can effectively reduce the risk of falls and improve daily functioning and quality of life in this vulnerable population.
- Further research, including randomized controlled trials, is necessary to confirm these findings and explore the long-term benefits and potential mechanisms of such interventions in different populations and settings.

MOHAK TEAM

THANK YOU

We offer various treatment modalities for obesity. The operation is determined by the profile of the patient and guided by findings from analysis of the data from our prospectively maintained database