

اله السماء يعطينا النجاح

و نحن عبده نقوم و نبني

EFFECT OF REFLEXOLOGY ON STIFF SHOULDER IN PATIENTS WITH LYMPHEDEMA

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By

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تأثير الريفلكسولوجى على تيبس الكتف فى مرضى التورم الليمفاوى

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INTRODUCTION

- *Breast cancer refers to a malignant tumor that has developed from cells in the breast. Breast cancer is second only to skin cancer as the most common cancer in women. The World Health Organization classification of breast tumors organizes both benign and malignant lesions by histological pattern. Mastectomy is a medical removal of one or both breasts partially or completely. Mastectomy is usually done to treat breast cancer and is the main treatment of breast cancer(American Joint Committee on Cancer Breast, 2010).*

Following mastectomy for breast cancer, many women experience impairment in shoulder movements that can substantially affect their everyday function and quality of life. Although some symptoms, such as arm swelling due to lymphedema are easily accounted for, other symptoms, such as chronic ache and pain which women report in the shoulder and upper trunk months to years after surgery, are not always associated with their physical strength (force-generating capacity) or range of motion at the shoulder. The lack of a relationship between impairments and self-reported function suggests that other factors are likely to contribute to these persisting problems (Merchant et al., 2008).

Statement of Problem:

- *Did reflexology have an effect on stiff shoulder in patients with lymphedema?*

Purpose of Study:

- *To find out the effect of reflexology on stiff shoulder in patients with lymphedema.*

Significance of Study:

- *Breast cancer is the most common non-cutaneous malignancy, accounting for nearly one in three cancers diagnosed among women. Lymphedema is a side effect that can begin during or after breast cancer treatment. It isn't life threatening, but can last over a long period of time(DeSantis et al., 2011).*

- *Women who undergo mastectomy are almost 6 times more likely to experience shoulder restriction and impairment than patients who undergo breast-conserving surgery, and, despite improved surgical techniques and postoperative care, pain and functional limitation continue to pose problems (Cheville and Tchou, 2007).*

- *There are a lot of women suffering from lymphedema and shoulder restriction and impairment following mastectomy so this study was needed to provide a guideline about the role of reflexology in the management of post mastectomy lymphedema and stiff shoulder.*

- *Current therapies available for weight management that cause weight loss by inducing a negative energy balance include: dietary intervention, physical activity, pharmacotherapy, and surgery. Behavior modification to enhance dietary and activity compliance is an important component of all of these treatments. (Sjostrom et al., 2004)*

Null Hypothesis:

- *There would be an effect of reflexology on stiff shoulder in patients with lymphedema.*

PATIENTS AND METHODS

1-Patients:

- *40 women (ages from 40 to 60 years) had radical or modified radical mastectomy with axillary lymph nodes dissection and lymphedema of the upper limb secondary to surgical and for radiotherapy intervention for breast cancer was participated in the study for three months. The study was done in Nasr City police hospital. The training program was carried in the duration from December 2013 to January 2015.*

Inclusion criteria:

- *Criteria of selecting the patients from hospital included the following:*
- *1-Women (unilateral) patients with ages ranged from 40 – 60 years.*
- *2-All patients were free from any other pathological conditions or histories of other health abnormalities except arm lymphedema and stiff shoulder.*
- *3-They had undergone modified radical mastectomy with axillary lymph node dissection with or without radiotherapy intervention.*
- *4-Body mass Index were 29.7 ± 2.27 kg/m²*

- *Exclusion criteria:*

- *Patients excluded from the study if they had met one of the following criteria:*
- *1- Recurrent malignancy. Active infection and clinical evidence of obstructive venous disease.*
- *2-Bilateral upper limb lymphedema disease.*
- *3- Neurological or orthopedic problems and diabetes.*
- *Patients were assigned randomly into two groups equal in number:*

- *-Group A (study group):
Twenty women had radical or modified radical mastectomy with axillary lymph nodes dissection and lymphedema of the upper limb received foot and hand reflexology on shoulder area and upper lymphatic area in addition to traditional physical therapy treatment that include active shoulder ROM exercise and short-stretch compression bandaging for 3 times per week for 12 weeks.*

- *-Group B (control group):
Twenty women had radical or modified radical mastectomy with axillary lymph nodes dissection and lymphedema of the upper limb received the traditional physical therapy treatment that include active shoulder ROM exercise and short-stretch compression bandaging for 3 times per week for 12 weeks.*

2-Instrumentation:

A) Evaluation instruments:

- *1) Tape measurement:*
- *A simple retracting unstretchable plastic tape of 50 cm. It was used to measure amount of edema :*



2) Goniometer:

- *It was fabricated in plastic material. It is consisted of two plastic arms (stationary arm and movable or free arm) and fulcrum. It was used to measure range of motion of shoulder joint (flexion – abduction- external rotation).*



- *B) Training instruments:*
- *1-Reflexology on shoulder area and upper lymphatic area.*
- *2-Active shoulder ROM exercise.*
- *3-Short-stretch compression bandaging.*

- **3-Procedures:**

- A) Evaluation procedures:*

- Before starting procedure:*

- 1-Measurements of circumferential lymphedema formation*



2-Measurement of shoulder ROM:

C-Shoulder external rotation measurement procedures



B) Treatment procedures:

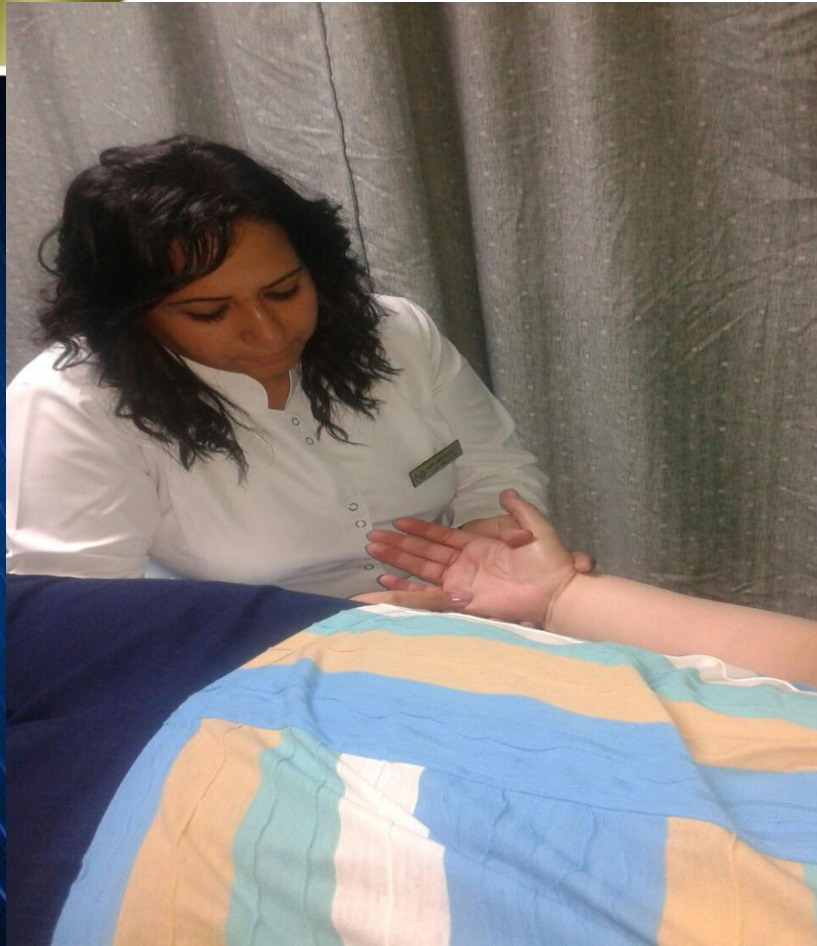


Reflexology on upper lymphatic area



Reflexology on shoulder point

B-Hand reflexology



Reflexology on edge of the base of the little finger



Reflexology on entire of the thumb



**Reflexology on the channel
between the bones on the
back of the palm**

2-Active shoulder ROM exercise:



**Active shoulder abduction
range of motion exercise**



**Active shoulder flexion
range of motion
exercise**



Active shoulder external rotation range of motion exercise

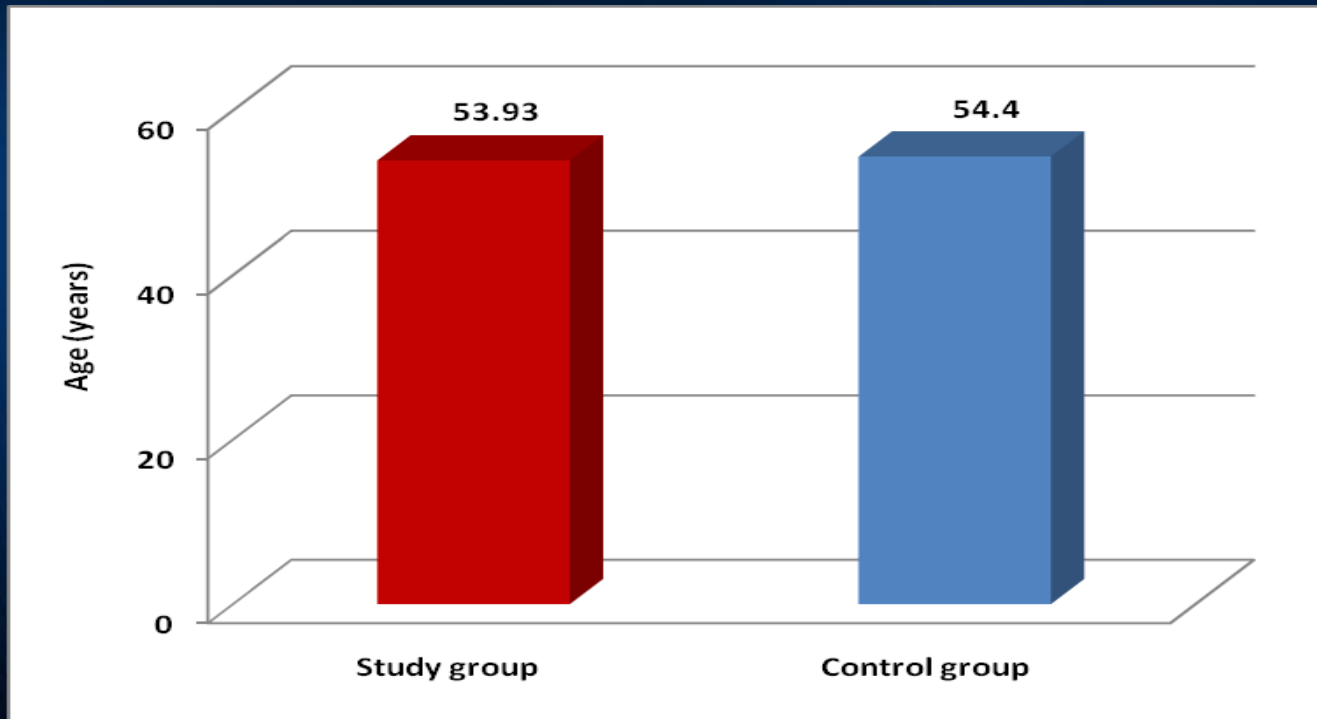
3-Short-stretch compression bandaging.



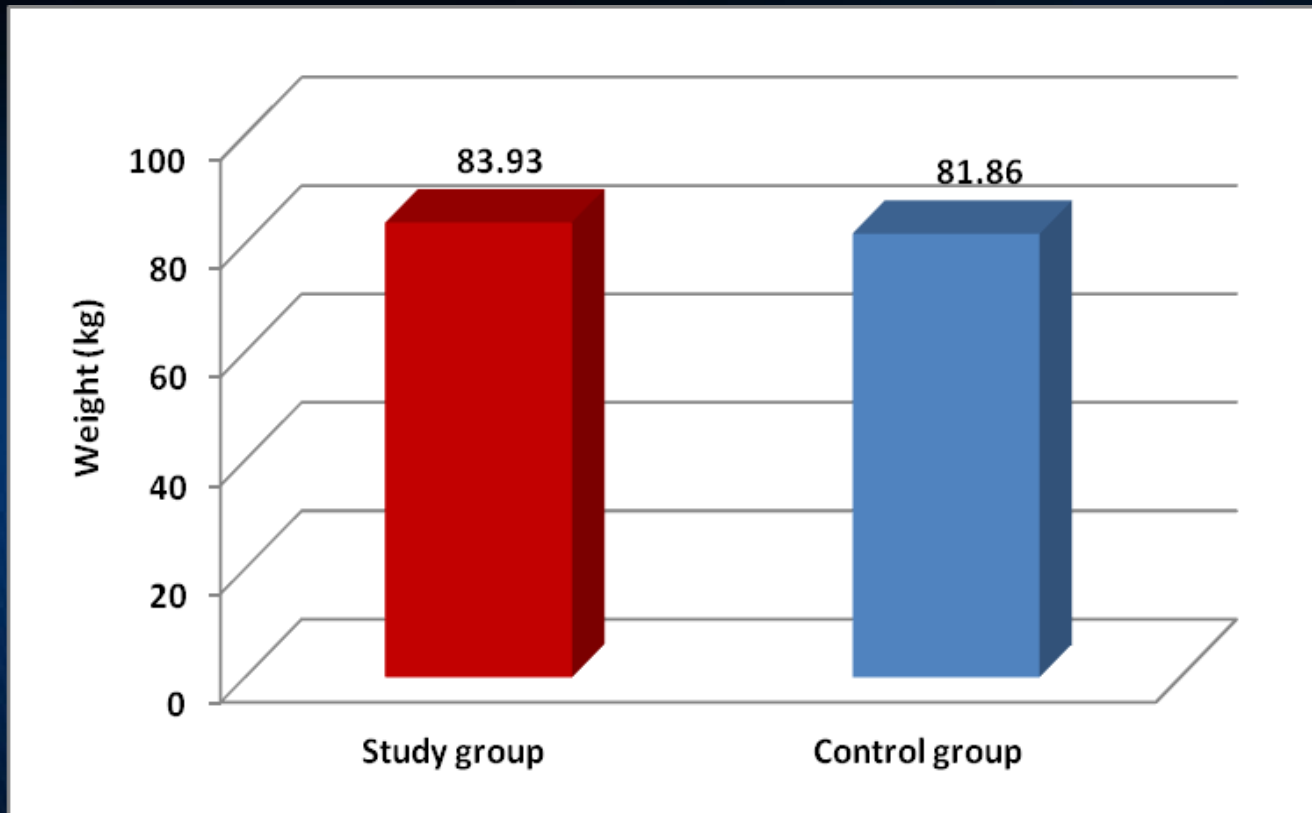
Application of Short-stretch compression bandaging

RESULTS

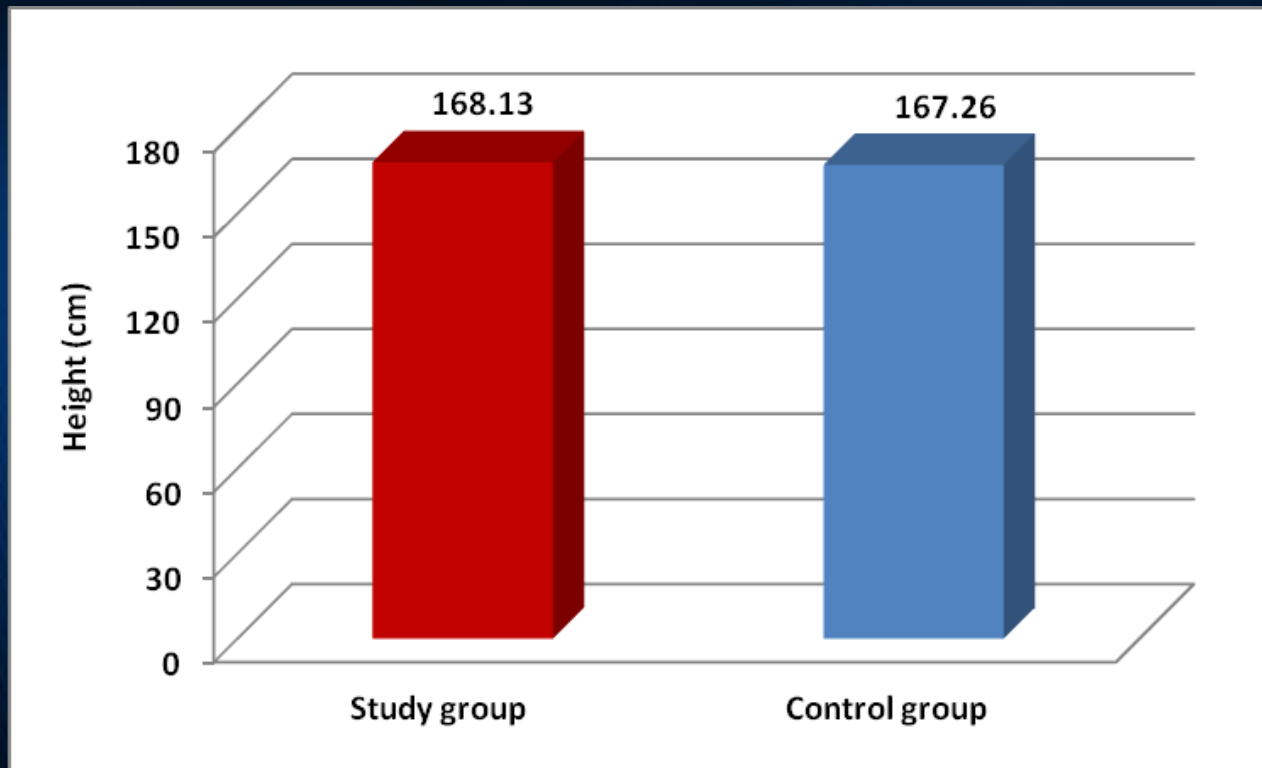
Shows mean age (years) of study and control groups



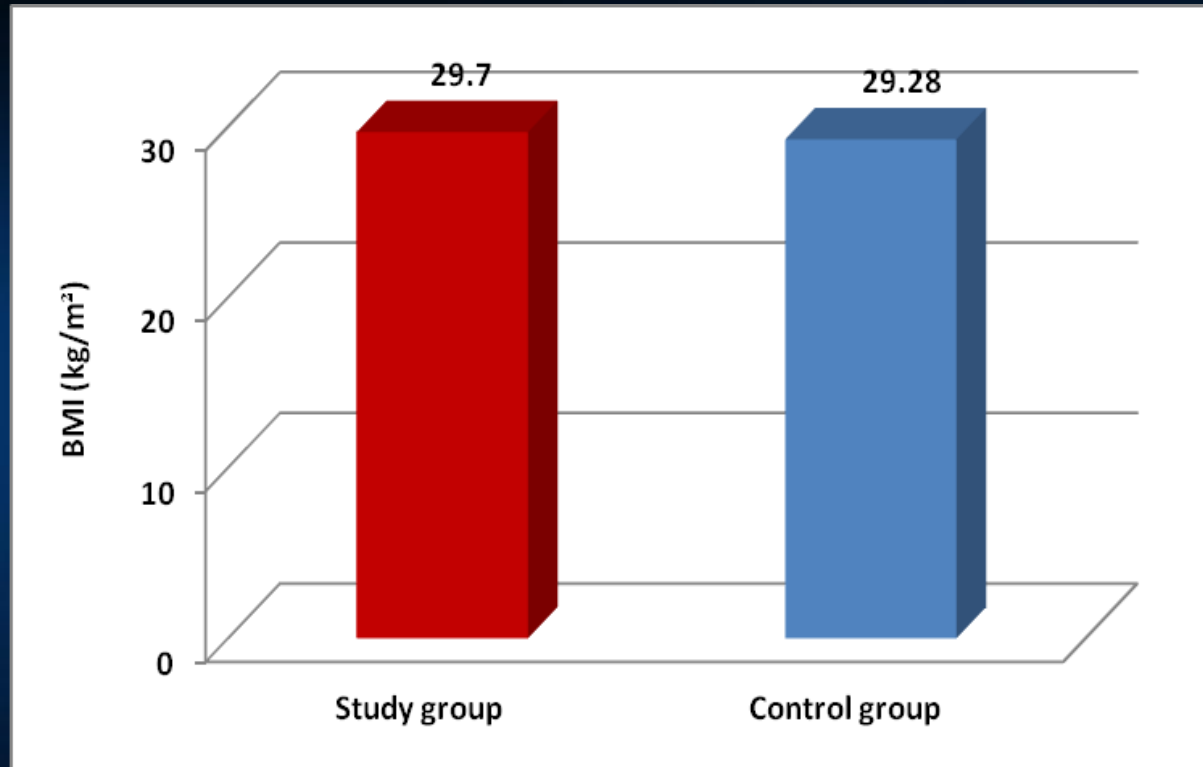
Shows mean weight (kg) of study and control groups.



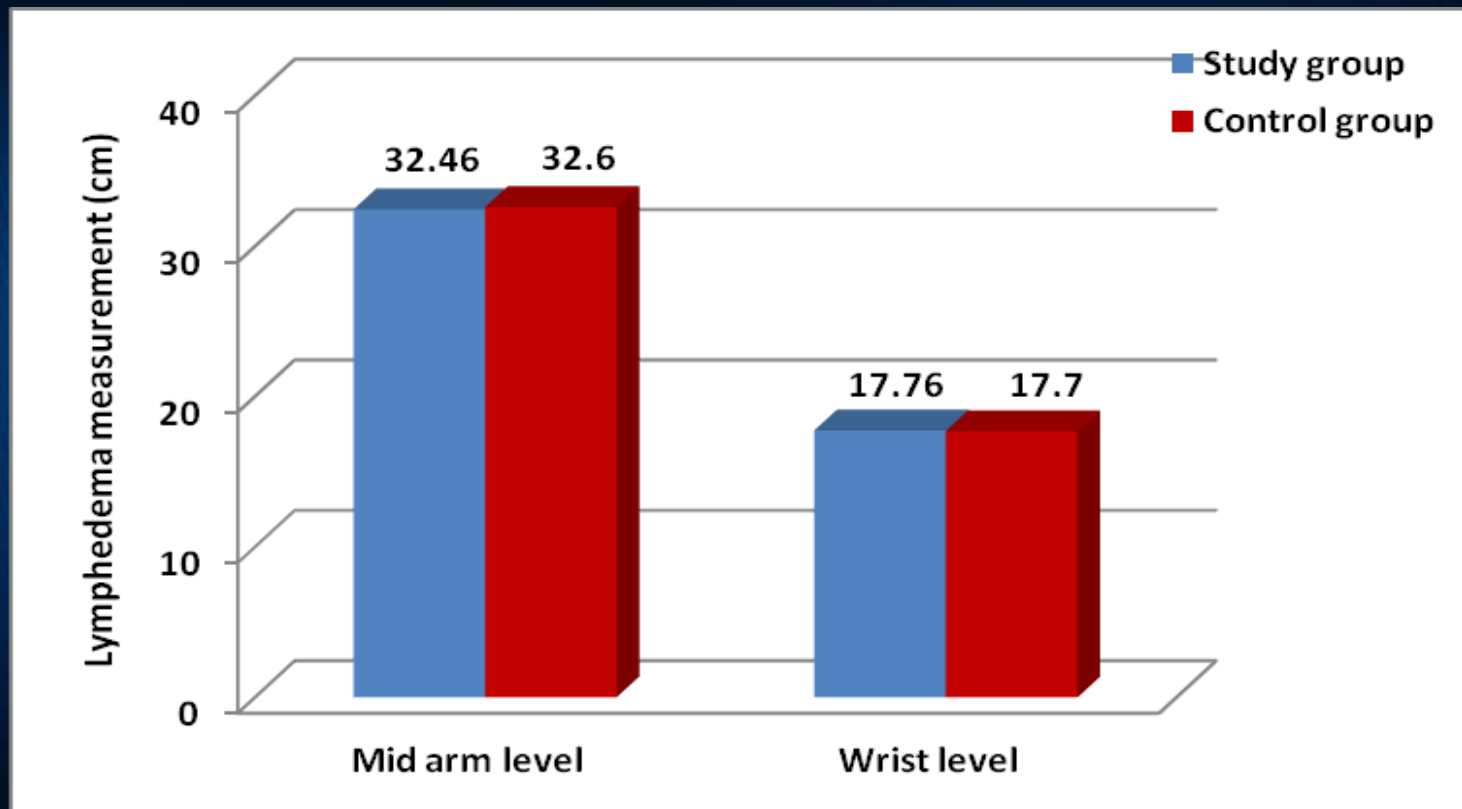
Shows mean height (cm) of study and control groups



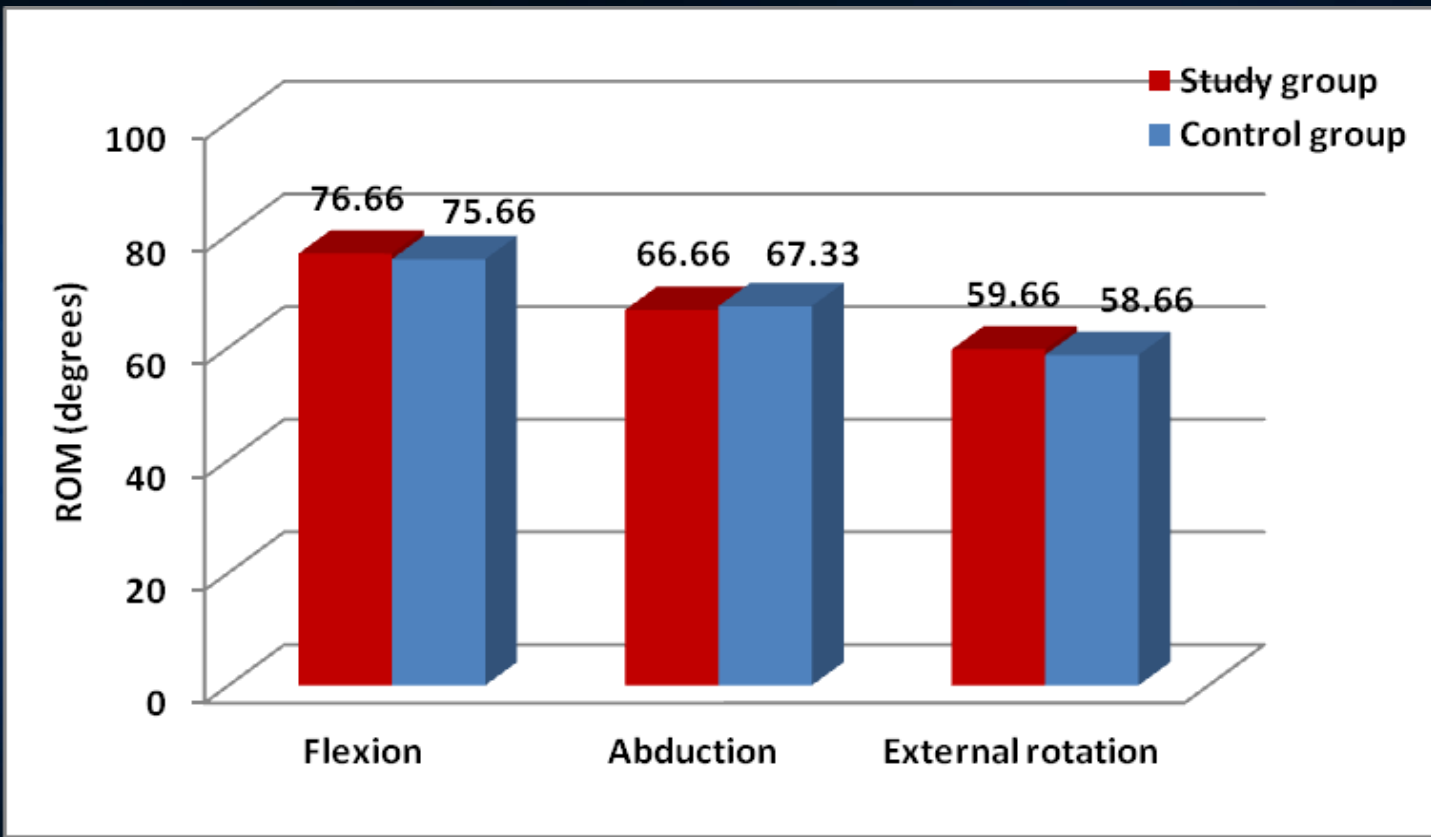
Shows mean BMI (kg/m²) of study and control groups.



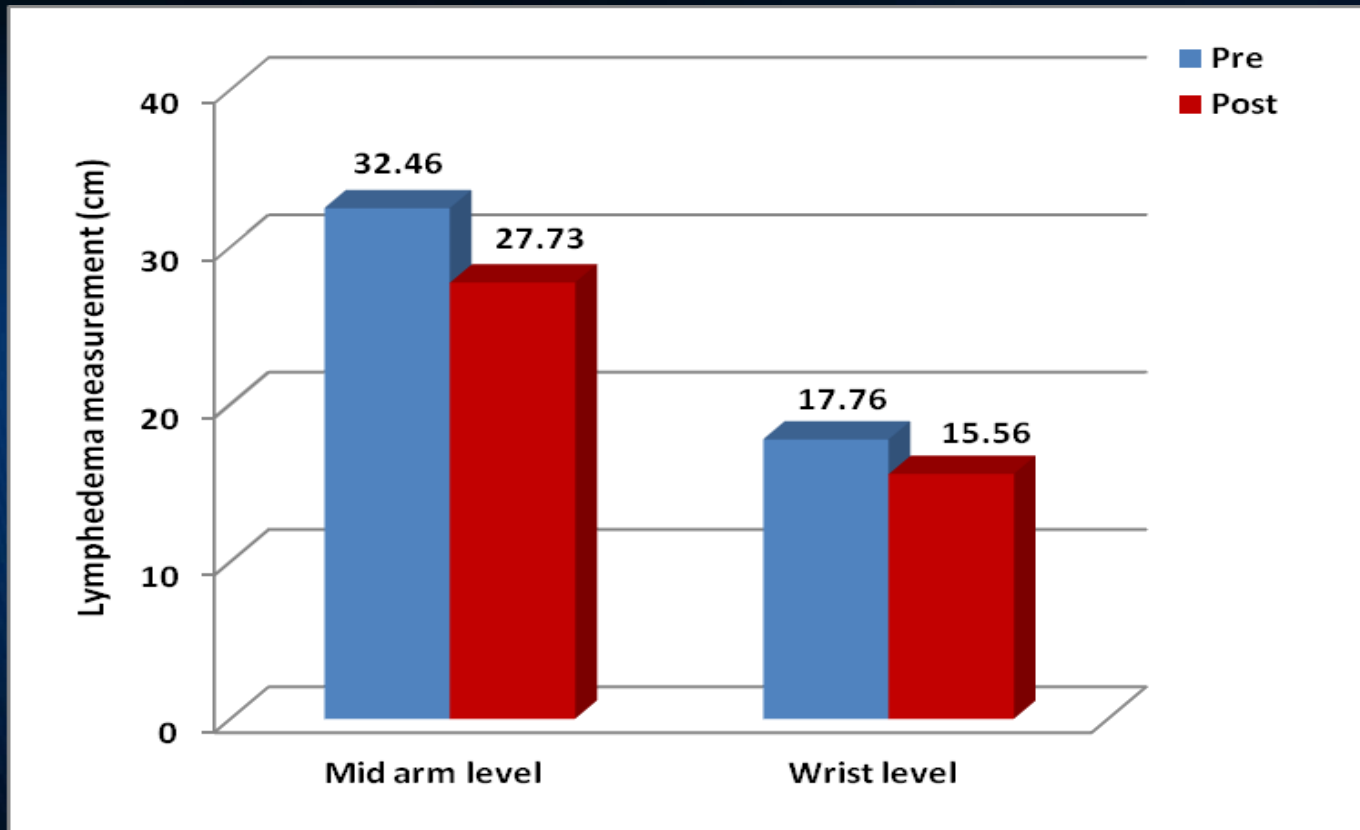
Shows pre treatment mean values of lymphedema measurement of study and control groups



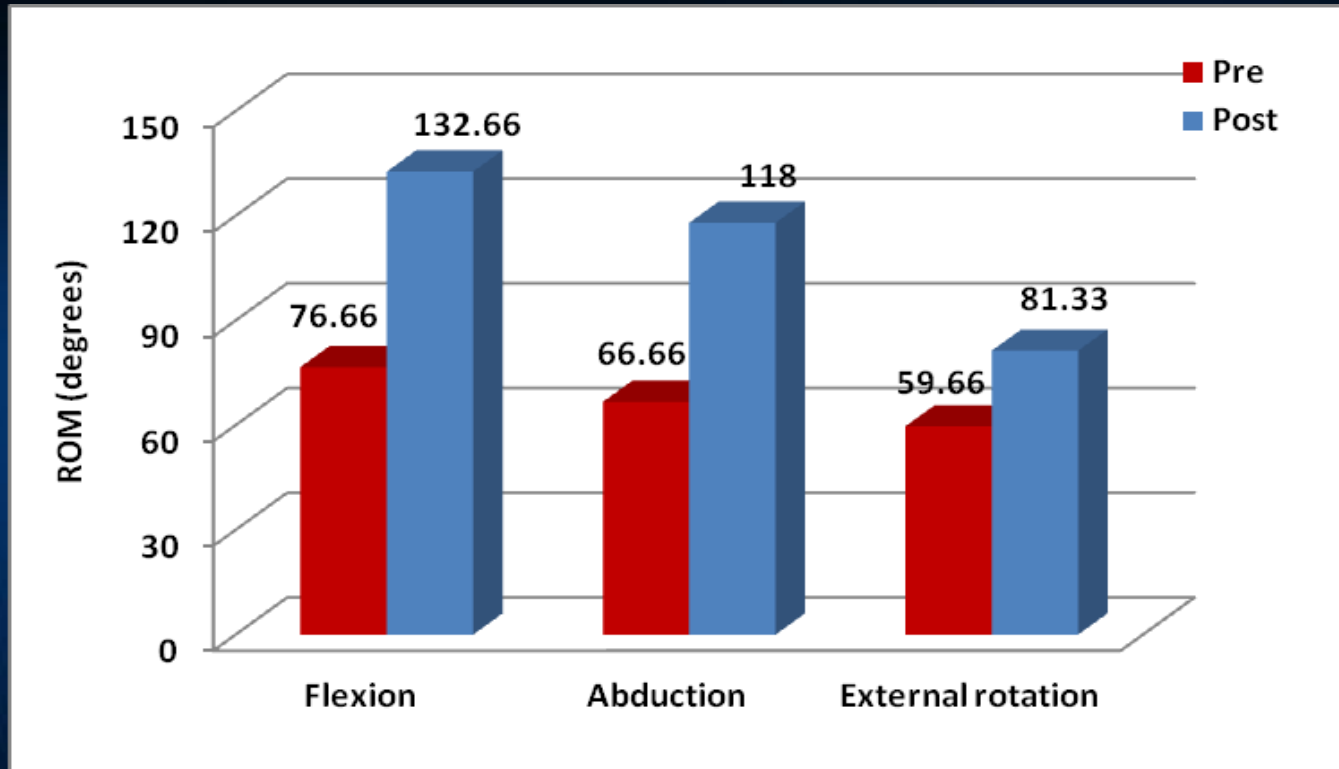
Shows pre treatment mean values of shoulder ROM of study and control groups.



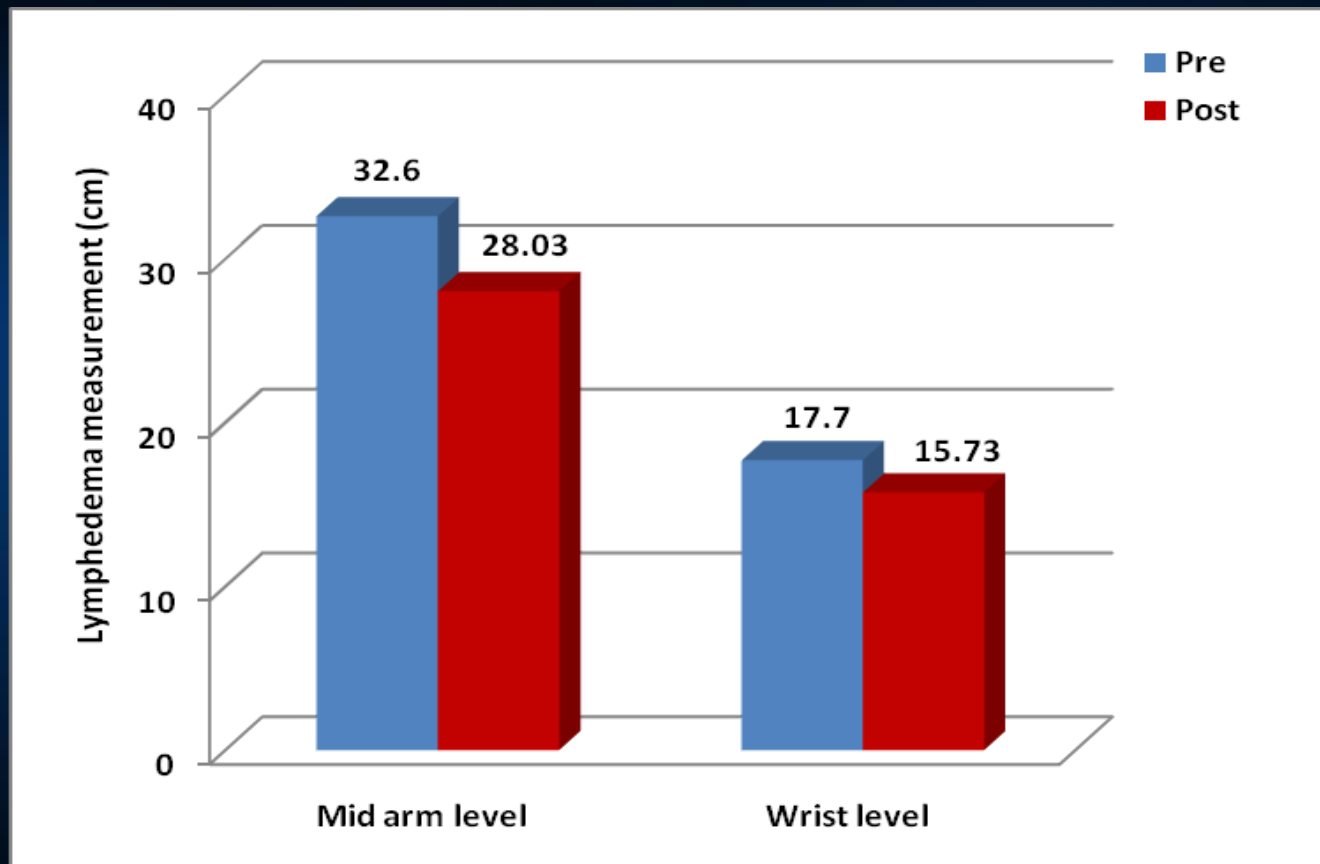
Shows pre and post treatment mean values of lymphedema measurement of study group.



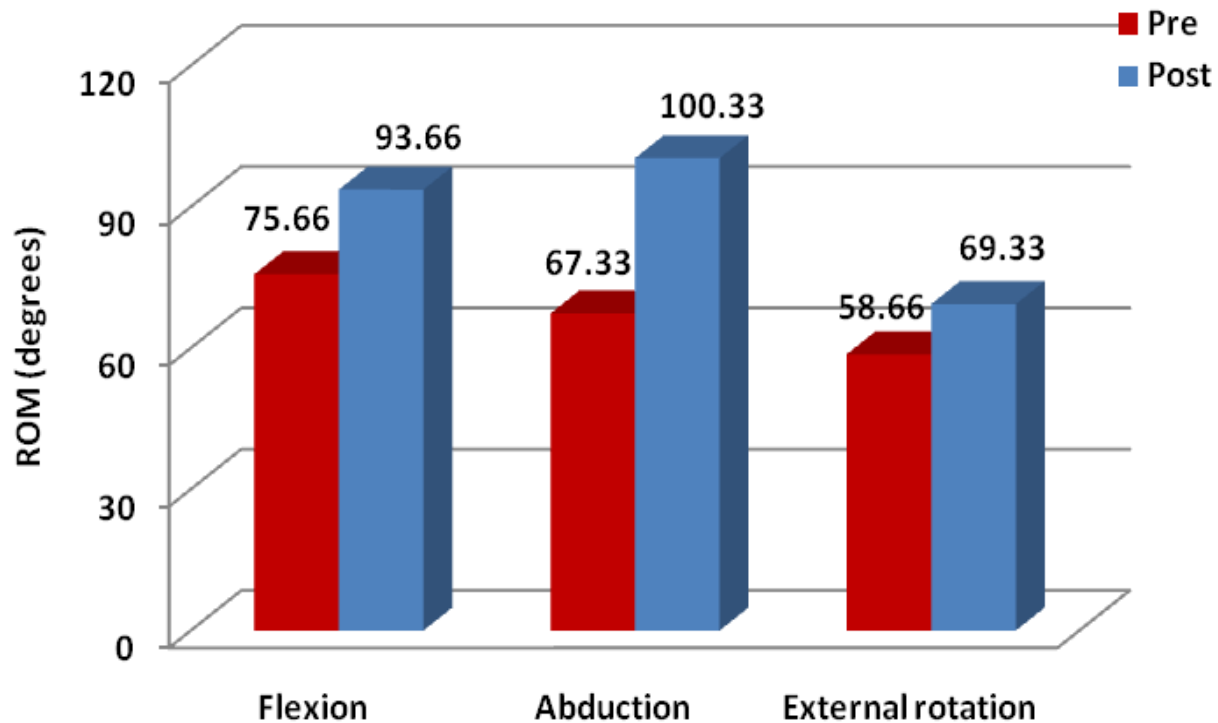
Shows pre and post treatment mean values of shoulder ROM of study groups



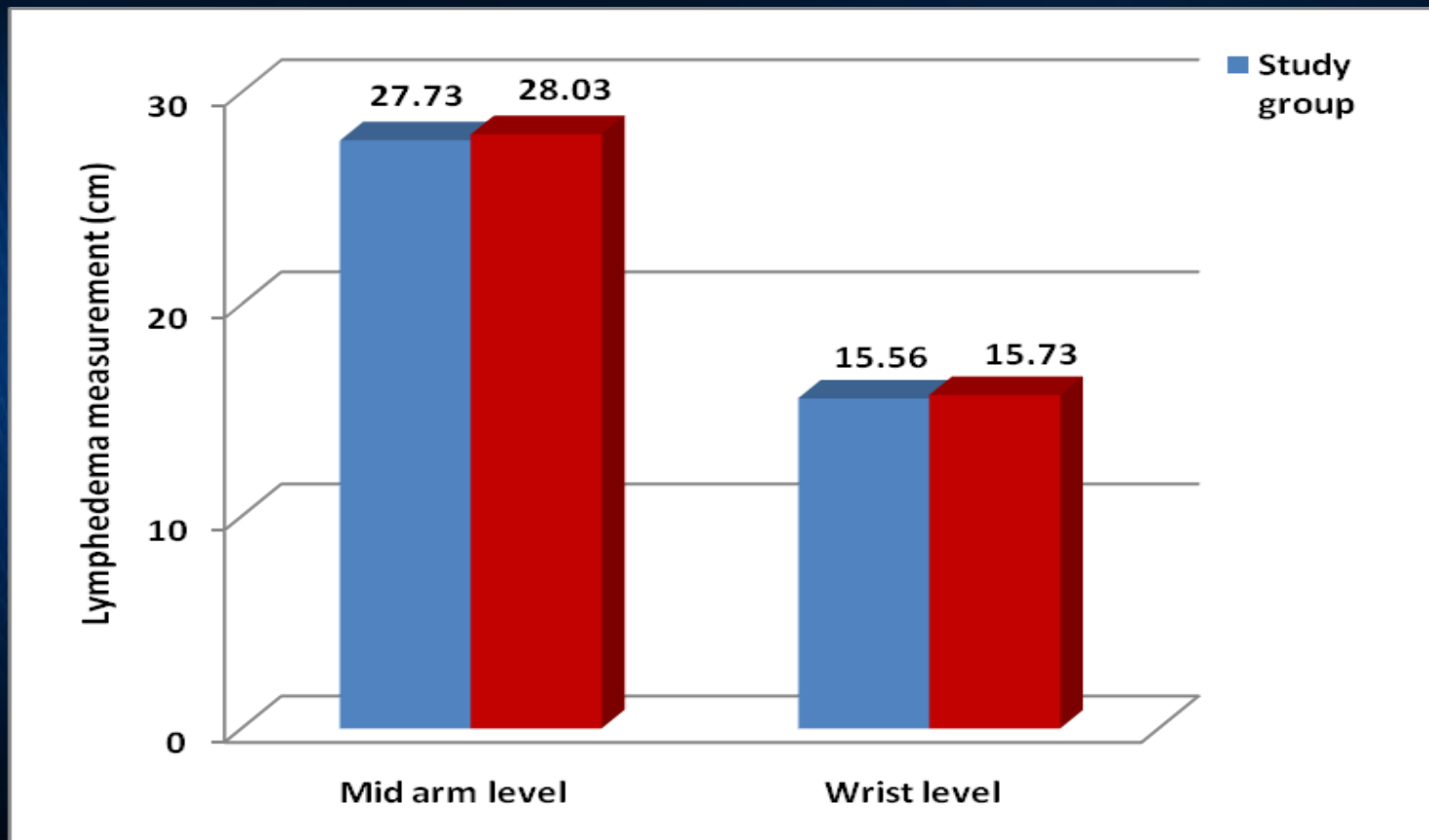
Shows pre and post treatment mean values of lymphedema measurement of control group



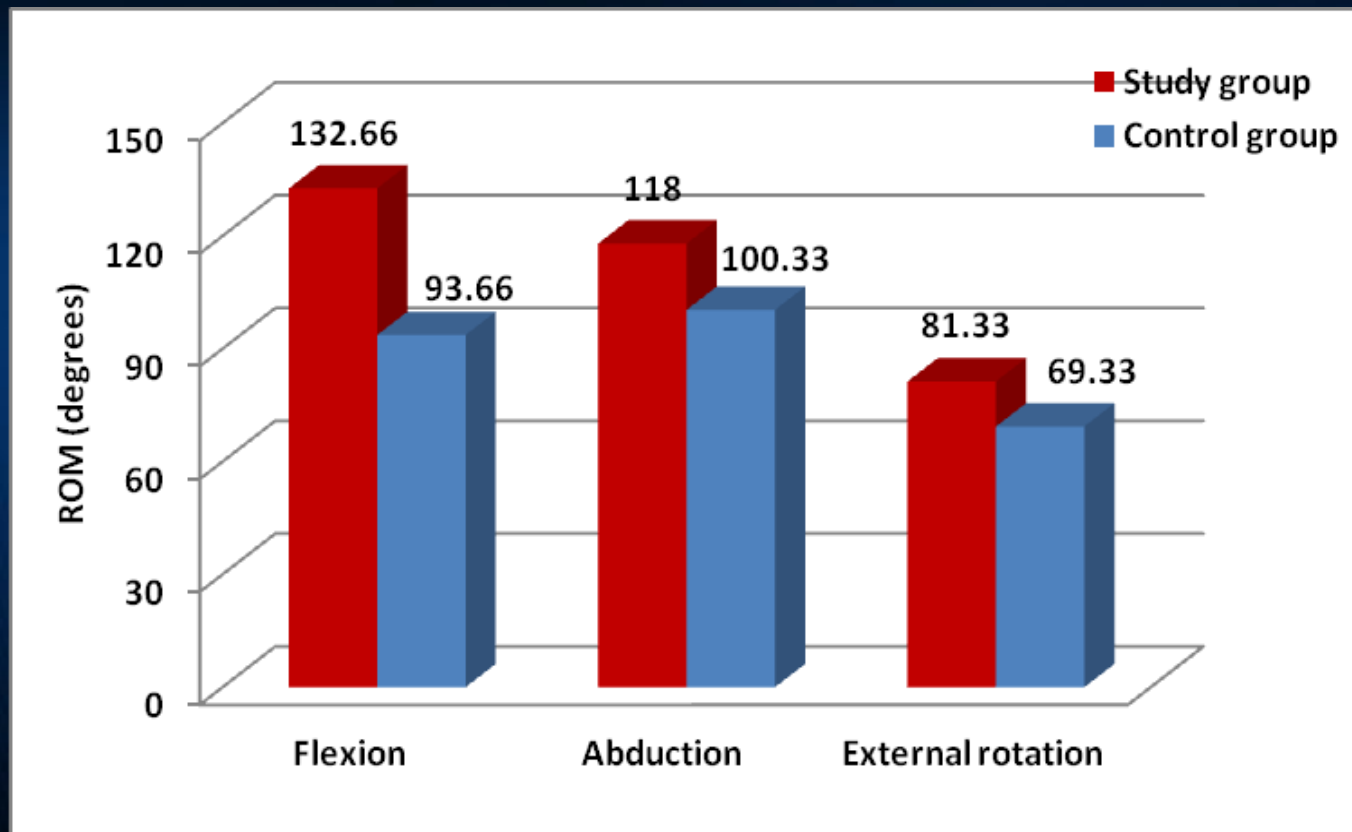
Shows pre and post treatment mean values of shoulder ROM of control groups.



Shows post treatment mean values of lymphedema measurement of study and control groups.



Shows post treatment mean values of shoulder ROM of study and control groups.



CONCLUSION

- **It was concluded that:**

Hand and foot reflexology plus traditional physical therapy have a significant effect on breast cancer patients with lymphedema which in turn help to improve shoulder ROM and functional capacity of upper limb.

RECOMMENDATIONS

- **Posters in lymphedema outpatient clinics to show the benefits of reflexology in dealing with stiff shoulder in patients with lymphedema.**
- **More researches are recommended to study the effect of reflexology on quality of life and finger mobility in patients with lymphedema especially in self-care activities.**
- **Future researches to find out the effect of reflex and exercises on all shoulder movements directions.**

Thank You

