

# TO FIND THE INTRA-RATER RELIABILITY AND CONCURRENT VALIDITY OF TWO METHODS OF MEASURING PECTORALIS MINOR TIGHTNESS IN **PERIARTHRITIC SHOULDER PATIENTS.**

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## INTRODUCTION

muscle 🍃 Postural abnormality and imbalance are thought to contribute to pain & loss of normal function in the upper body. A shortened pectoralis minor muscle is commonly identified as a part of this imbalance.<sup>1</sup> Decrease in resting length of pectoralis minor muscle would increase the muscles passive tension with arm elevation causing restriction of normal scapular movements.<sup>2</sup> Shoulder Periarthritis is one such condition in which there is less scapular posterior tilt due to short pectoralis minor.

### **NEED OF THE STUDY**

Checking muscle tightness is important part of examination There are various methods for testing pectoralis minor tightness. Earlier the studies have been done on healthy adults & cadavers. So it was necessary to find out which method is best & easily performed on patients.

#### **OBJECTIVES**

- То the intra-rater evaluate reliability of Acromion to Table (AT) distance and Pectoralis Minor length Index (PMI)
- $\triangleright$ To validate AT distance and PMI using Forward Shoulder Angle (FSA).

# **STUDY PROTOCOL Study Design:** Observational

study

**Study setup:** Physiotherapy department

Sample size : 50 Individuals (22 males; 28 females)

## **INCLUSION CRITERIA**

> Patients with unilateral Periarthritis stage 2

- Presence capsular pattern of ER>ABD>IR
- ➤ Age 40-60yrs

## **EXCLUSION CRITERIA**

- ➤ Trauma and surgery around shoulder
- Cervical Radiculopathy
- Rheumatoid arthritis
- > Any neurological condition METHOD

50 Periarthritic (unilateral) shoulder patients -28 females, 22 males

Patient - 2 AT distance

PMI







#### CONCLUSION Both methods AT distance & PMI are



Data analysis was done by SPSS 16 version.

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**Correlation of AT distance** 

& FSA

AT distance

80

60

**40** 20

0

- > The intra-rater reliability was assessed by Intra-Class Correlation (ICC).
- Concurrent validity was assessed by Pearson's correlation co-efficient (r).

Intraclass







AT

found to be reliable.

- $\succ$  When both are correlated with FSA, PMI is accurate & valid.
- $\succ$  FSA measurement requires tedious work & may not be possible at every clinical setup, so one can use any 1 of the above methods.

#### **CLINICAL IMPLICATION**

The clinical measurement of the pectoralis minor resting length may guide the Physiotherapist to know which method is best & thereby assist in assessment, treatment planning & assessing intervention effectiveness at every clinical setup.

	Correlation Coefficient	95% Confidence Interval (CI)		distance- FSA	PMI- FSA
AT distance	0.97	0.96 to 0.98	Pearson's correlation	0.32	-0.90
PMI	0.96	0.93 to 0.97			

# REFERENCES

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