

# THE USE OF THERABAND IN TREATMENT OF CHRONIC ELBOW STIFFNESS TO IMPROVE RANGE OF MOTION

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## Abstract— Aims-

1.To evaluate the effect of Theraband exercises to improve the range in Chronic elbow stiffness.

2. To improve Muscle Power at the same therapy session

3. To avoid occurrence of Myositis ossificans at the elbow which is the common complication in elbow passive stretching exercises.(1)

4. To improve independence in ADL of the client

## Methodology-

A screening had been done on the patients attending outdoor OT dept D. Y. Patil Hospital, who had already developed elbow stiffness post elbow fracture or dislocations which are treated conservatively or with int. Fixation. The duration of elbow stiffness was from 2 wks till 4mnths. The age group were from 10yrs to 70 yrs. Theraband was used for stretching of the elbow to improve range. At the same time muscle strengthening was achieved, as patient was instructed to relieve stretch when intolerable. Patient was given goal at every stretching so that it consist active stretching.

**Result-** All the patients showed complete recovery of ROM at the elbow joint with total inflammation reduced and pain minimal remaining. Duration of the recovery depended on duration of settled stiffness.

**Conclusion-** A very planned active assistive stretching helps to get the range. Theraband acts as auto assisted exercise, when the external force is applied by the individual himself rather than by therapist.(7) Theraband helps in stretching , to do exercises and achieve complete ROM and thus independence in ADL.

## Key words-

1. Theraband- A rubber band used for resistive exercises

2. OPD- Out patient department

3.ADL- Activities of daily living,

## I. AIMS

1.To evaluate the effect of Theraband exercises to improve the range in Chronic elbow stiffness.

2. To improve Muscle Power at the same therapy session

3. To avoid occurrence of Myositis ossificans at the elbow which is the common complication in elbow passive stretching exercises.(1)

4. To improve independence in ADL of the client

## II. METHODOLOGY.:

**Subjects** – 25 in nos. who were referred to OT treatment on OPD basis for mobilization and rehabilitation. They were 8 children and 17 adults.

## III. INCLUSION CRITERIA-

1. All elbow stiffness cases due to fracture, dislocations referred for mobilization after conservative or surgical treatment.

2. The onset of elbow stiffness acute or chronic from 2wks to 4 months.

## IV. EXCLUSION CRITERIA-

1. X-ray confirming arthrodesis at elbow joint.

2. Non stretchable Elbow contracture with hard end feel at the elbow.

3. Children below age of 7, who would not understand instructions.

4. Inflamed joint due to active infection at the joint.

## V. PROCEDURE-

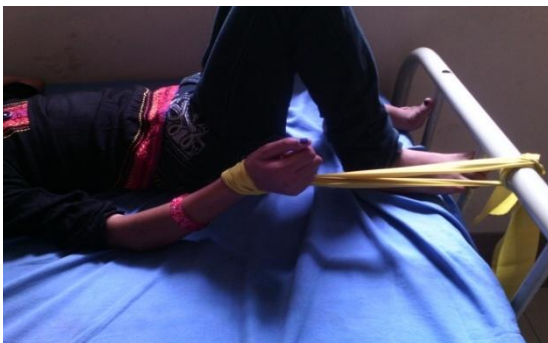
A screening had been done on the patients attending outdoor OT dept D. Y. Patil Hospital, who had already developed elbow stiffness post elbow fracture or dislocations which are treated conservatively or with int. Fixation. The duration of elbow stiffness was from 2 wks till 4mnths. The age group were from 10yrs to 70 yrs.

A detail evaluation of ROM and MP was done. Barthel index was used for ADL assessment. Dynamometer was used to measure grip strength.

## VI. INTERVENTION-



*Figure.1*



*Figure.2*

After pre-therapeutic evaluation, Clients were given horizontal sanding for 10 mins as warm up exercise. For first 15 days, low resistive –yellow theraband was used. Patient positioned supine on bed. Theraband was attached to the wrist joint and the open end was attached to the bed frame, giving a very slight stretch at elbow joint, in flexion and in extension.(2) The supine position of the patient is to allow complete relaxation of the muscles to be stretched, and let the stretch act on the joint. Proper limb alignment ensures that the proper tissues are being stretched without causing injury to adjacent structures. Whenever pain is intolerable, Patient can relieve pain by stretching theraband in opposite direction. In that movement opposite group of muscles were acting against resistance. ( In flexion stretching, extensors were acting and in extension, flexors were acting)

As the patient can tolerate, resistance of the theraband was increased. Treatment session with the theraband lasted for 15 minuts.(3)Stretches should be held minimum of 30 seconds in younger patients and 60 seconds in older patients for optimal results. Static stretching offers advantage of using less overall force, decreasing the danger of exceeding the tissue extensibility limits, lower energy requirements and lower likelihood of muscle soreness. To improve MP, patient was asked to relieve stretch at least 10 times.

## VII. DATA COLLECTION

Pre therapeutic measurement for ROM and MP and hand function was done. Post exercise again the measurements are taken weekly.

## VIII. RESULT

All the patients showed complete recovery of ROM at the elbow joint with total inflammation reduced and pain minimal remaining. Duration of the recovery depended on duration of settled stiffness.

## IX. DISCUSSION

Elbow stiffness or contracture is a major problem for self care and dressing, patients frequently have a tendency to disassociate the injured extremity from their body due to fear of pain on movement. If exercises not following at home or therapy not received on time or correct therapy program not followed leads to progressive adaptive shortening of the soft tissue as the body responds to decreased loading. This shortening limits mobility and function reducing the patient's ability to carry out normal ADL.(4). A very planned active assistive stretching helps to get the range, followed by active exercise to wash out the residues of fibrosis breaking. Improving MP by active exercises at Patient's will.- which reduces his anxiety . Otherwise chances of myositis ossificance is high(5) Passive stretching is strictly contra indicated particularly in elbow joint.(6) Theraband acts as auto assisted exercise, when the external force is applied by the individual himself rather than by therapist.(7) Theraband helps in stretching , to do exercises and achieve complete ROM and thus independence in ADL.

## X. CONCLUSION

A very planned active assistive stretching helps to get the range. Theraband acts as auto assisted exercise, when the external force is applied by the individual himself rather than by therapist.(7) Theraband helps in stretching , to do exercises and achieve complete ROM and thus independence in ADL.

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