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CONSERVATIVE TREATMENT IN CALCIFYING TENDINITIS OF SHOULDER

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ABSTRACT. Introduction: Calcium tendinopathy of the shoulder is a familiar, unpleasant situation distinguished by calcium buildups in rotating tendons. Current assumptions suggest that these calcifications might originate from a cellular-involved procedure in whom, following a calcium sedimentation phase, calcifications are suddenly re-orbited. **Objectives:** This paper aims to establish non-surgical therapeutic conduct of maximum efficiency in the case of calcified Tendinitis in the shoulder by combining methods of physiokinetotherapy. **Methods:** The research methods used by us were: bibliographic method, experimental method, case study method, observation method, test method, statistical-mathematical methods of data processing, graphic method of presentation of results, Shapiro-Wilk test, t-Student test, parametric test for unpaired data, respectively Mann-Whitney test, non-parametric test for unpaired data. **Results:** As a result, statistically, using the t-Student test, $p<0.05$, we found a statistically significant difference between the averages of the abstraction values in weeks 8 and 12 in the two lots. **Conclusions:** Kinetic treatment ensures improvement of the algal component and functional parameters, thus ensuring the patient's quality of life by combating muscle contractions and increasing joint mobility.

Keywords: *Tendinitis, physiokinetotherapy, calcification.*

REZUMAT. ***Tratamentul conservator al tendinitelor calcifiate la nivelul umărului*****. Introducere:** Tendinopatia calcică a umărului este o afecțiune frecventă, dureroasă, caracterizată prin prezența depunerilor de calciu în tendoanele manșetei rotative. Teoriile actuale indică faptul că aceste calcifieri pot fi rezultatul unui proces mediat celular în care, după o etapă de depunere a calciului, calcificările sunt resorbite spontan. **Obiective:** Obiectivul lucrării de față este stabilirea unei conduite terapeutice nechirurgicale de maximă

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eficienţă în cazul tendinitelor calcifiate la umăr, prin combinarea metodelor de fiziokinetoterapie. **Metode:** Metodele de cercetare utilizate de noi au fost: metoda bibliografică, metoda experimentală, metoda studiului de caz, metoda observaţiei, metoda testelor, metode statistico-matematice de prelucrarea a datelor, metoda grafică de prezentare a rezultatelor, testul Shapiro-Wilk, testul t-Student, testul parametric pentru date nepereche, respectiv testul Mann-Whitney, test non-parametric pentru date nepereche. **Rezultate:** Ca şi rezultate, din punct de vedere statistic, utilizând testul t-Student, $p<0,05$, am constatat că există o diferenţă semnificativă statistic între mediile valorilor abducţiei în săptămâna 8 şi 12 la cele 2 loturi. **Concluzii:** Tratamentul kinetic asigură ameliorarea componentei algice şi a parametrilor funcţionali, asigurând astfel îmbunătăţirea calităţii vieţii pacientului prin combaterea contracturilor musculare şi prin creşterea mobilităţii articulare.

Cuvinte cheie: *tendinită, fiziokinetoterapie, calcifiere.*

Introduction

Calcifying Tendinitis (CT) Shoulder a self-restricting shoulder syndrome defined by sedimentation of calcium salts in rotator cuff muscles. Terms equivalent are Calcific periarthritis, Calcifying Tendinitis (CT) Shoulder, a self-limiting disorder of shoulder described by sedimentation of calcium sodium in rotator cuff muscles. Words corresponding are Calcific periarthritis (Bosworth, 1941). The etiology stays uncertain with several recommended hypotheses of etiopathogenesis. The displaying symptom is usually pain affiliated via activity enduring for months through unexpected regression in particular incidents. Some enjoy long-standing pain and swelling, necessitating proactive intervention. This paper aims to evaluate the calcifying Tendinitis of the shoulder and effective administration alternatives for symptomatic incidents (Umamahesvaran et al., 2018).

Calcific Tendinitis of the shoulder is a severe or congenital pain disorder because of calcific buildups' existence within or throughout the rotator cuff's tendons. It is triggered by the sedimentation of calcium hydroxyapatite crystallites frequently inside the supraspinatus and infraspinatus tendons (Speed et al., 1999; DE Carli et al., 2014).

Rotator cuff condition of the shoulder features a wide range of conditions, amongst which calcific tendinopathy (CT) performs a well-known involvement. Though Calcifying Tendinitis is remarked predominantly in the shoulder, and it might stand discovered through the frame (Ea et al., 2014; Sansone et al., 2018).

Calcifying Tendinitis is a prevalent unpleasant condition described by ossifications in either the matter or inclusion of the RCT and the synovial matters constituting the subacromial bursa. Calciferous material constitutes calcium hydroxyapatite clumps in crystalline or shapeless shape (Chiou, 2010; Sansone et al., 2018).

Calcific Tendinitis corresponds to hydroxyapatite crystals' pathological sedimentation in tendons, spearheading to a restricted spectrum of motion of the associated joint. Calcific tendinopathy and hydroxyapatite sedimentation disorder are different terms that are used to indicate this disorder. The calcific buildups may cause responsive inflammatory transformations and may trigger agonizing discomfort. If the buildups are substantial, indeed, they may experience the manifestations of impingement. This disorder infects the shoulder's rotator cuff tendons typically; however, separate participation complexes are also recorded, such as the hip, elbow, wrist, and knee (Hayes, 1990; Kalaycı & Kızılkaya, 2019).

Calcific deposits are not frequently symptomatic and can be the collateral discoveries of the imaging research of whichever joint and periarticular soft tissues (Hayes et al., 1987; Kalaycı & Kızılkaya, 2019). On the different hand, some buildups may be a considerable origin of joint pain (Bosworth, 1941; Kalaycı & Kızılkaya, 2019) and perceive for 7% of shoulder discomfort (Speed et al., 1999; Kalaycı & Kızılkaya, 2019).

RCCT— Rotator cuff calcific tendinopathy is a pervasive disorder triggered by the existence of calcific buildups in the RC or the SASD— subacromial-subdeltoid bursa through ossification propagates across the sinews (Silvestri et al., 2017; Splendiani et al., 2014; Barile et al., 2013; Masciocchi et al., 2014; Chianca et al., 2018). This disorder has been posted in 2.5%-7.5% of healthful shoulders in grownups (Barile et al., 2017; Zappia et al., 2017; Arrigoni et al., 2017; Chianca et al., 2018), manifesting in women in approximately 70% of incidents, mainly through the 4th and fifth decades of existence (Clavert and Sirveaux, 2008; Reginelli et al., 2017; Di Pietto et al., 2017; Chianca et al., 2018) and seems not to be correlated to physical activity (De Filippo et al., 2017; Masciocchi et al., 2016; Barile et al., 2016; Chianca et al., 2018). In approximately 10–20% of patients, calcific deposits are multilateral.

The etymology of CT is, however, challenging. Many suppositions for the compulsive procedure have been indicated: degenerative (Benjamin et al., 2000; Sansone et al., 2018) repetitive trauma, (Benjamin et al., 2000; Sansone et al., 2018) tenocyte necrosis, (Benjamin et al., 2000; Sansone et al., 2018) reactive, (Uhthoff, 1997; Sansone et al., 2018) and endo-chondral ossification; (Uhthoff, 1975; Sansone et al., 2018) nevertheless, no-one of these interpretations has demonstrated to be completely acceptable. Moreover, extraneous variables such

as age and BMI have demonstrated to be affiliated with shoulder discomfort in CT. The growth in discomfort with age tightly resembles the assertions for rotator cuff tears (Yamamoto et al., 2011; Tashjian et al., 2012; Sansone et al., 2018) and likewise, some unusual Body Mass Index was as well discovered to appear a threat element for establishing an RCT—rotator cuff tear or tendinopathy. (Wendelboe et al., 2004; Gumina et al., 2014; Sansone et al., 2018)

Calcific Tendinitis is one of the too prevalent reasons for non-traumatic discomfort in the shoulder (Rogers and Hendrix, 1988; Steinbrocker, 1985 Kachewar & Kulkarni, 2013). Bosworth (Bosworth, 1941 Kachewar & Kulkarni, 2013) published a prevalence of 2.7% in 6061 asymptomatic department employees when each shoulder was evaluated by radiography; Uhthoff and Sarkar (Uhthoff, 1989 Kachewar & Kulkarni, 2013) reported that Welfing et al discovered an occurrence of 7.5% in 200 symptomless patients and of 6.5% in 925 symptomatic patients. Calcific Tendinitis is frequently uncovered in individuals of the elderly age communities (Hernandez-Santana et al., 2011; Hammer, 2007; Kachewar & Kulkarni, 2013), also representing a problem in team sports game too (Sopa, 2015; Sopa, 2019, Szabo et al. 2018, Szabo & Sopa, 2018).

Pre—calcification Stage

Patients typically do not enjoy any manifestations at this phase. The sites where the calcifications attend to establish undergo cellular transformations that influence the tissues to establish calcium buildups (Kachewar & Kulkarni, 2013).

Calcific Stage

Through this phase, calcium is excreted from cells, and it afterward coalesces into calcium buildups. Though it is noticed, the calcium looks calcareous. It is not a robust composition of bone. Once the calcification has been established, a so-called palliative phase starts with; this is not an unpleasant phase, and it might span for a diverse length of the period. After the resting period, a resorptive stage commences—this is the particularly agonizing chapter of calcific tendonitis. The calcium buildup looks like toothpaste deposits (Kachewar & Kulkarni, 2013).

Patients with CT usually existent extreme, disarming agony, who happens suddenly, typically in the forenoon. There may be corresponding rigidity, providing an increase to a cold shoulder-alike medical portrait. Convalescents might note frontal anguish, situated next to the bicephalous depression (in whom the long head of the biceps stands), or dorsal agony, situated underneath the scapula's spine. There might appear simultaneous contracture of the trapezius and rhomboids (DE Carli et al., 2014).

The administration of CT includes NSAIDs, frequently useful to liberate discomfort in the acute periods of the pathology, suitable physiotherapy to combat articular rigidity, nearby steroid injections, and more unprecedented medication techniques such as extracorporeal shock wave therapy (ESWT) and US-guided needling (UGN). Surgical withdrawal of the calcium buildups, open or arthroscopic, is typically deliberate after conservative procedure error. Nevertheless, in the light of the latest, actually if not convincing, advancements on the root and the means of the disease, a more deliberate and responsive therapeutic strategy might be desirable (Sansone et al., 2018).

Design of the Research

This investigation was overseen under the Declaration of Helsinki (2013). It also met the ethical standards for Sport and Exercise Science Research, and the General data protection regulation entered into the appliance on 25 May 2018 (Regulation (EU) 2016/679).

At the Rheum-Care Recovery and Rehabilitation Centre in Targu-Mures, we conducted a prospective study based on data from 20 patients diagnosed based on clinical and paraclinical signs with calcified shoulder tendinitis, mainly calcified supraspinous Tendinitis.

Following an analysis of the problem of our study, we issued the following working hypothesis:

• Applying conservative treatment in the early stages of calcified shoulder tendinitis on a group of 10 subjects (patients) for four months will produce statistically significant changes in the effectiveness of different treatment methods and the intensity of symptoms and the influence of the disease on the patient's quality of life.

• The effectiveness of the treatment applied is significantly higher when combining different types of therapeutic interventions.

Between 5 October 2019 and 5 February 2020, at the Rheum-Care Recovery and Rehabilitation Centre in Tirgu Mureș, we built a studio on the effectiveness of conservative treatment of calcified shoulder tendinitis. We tracked the evolution of 20 patients diagnosed based on clinical and paraclinical signs with calcified supraspinous Tendinitis and processed the data obtained from them to formulate the results and conclusions.

To be included in the study, patients were selected who presented to the doctor with functional symptomatology at the shoulder joint present for at least one month, without associated pathology that is contraindications of electrotherapy (cardiovascular diseases, epilepsy, tumors, active TB, skin

lesions at the site of application of electrodes, etc.) or other musculoskeletal or neurological diseases that could negatively influence functionality. In all cases, X-rays performed in two incidences (antero—posterior and latero—lateral) revealed calcium deposits on the tendon without bone structure changes. The exclusion criteria were the presence of diseases representing absolute contraindications of electrotherapy, fractures, or severe trauma of the studied shoulder, low adhesion to the recommended therapeutic plan, non-compliant patient, alcohol, or drug abuse. Two study groups were formed. In group I, the study group consisted of 10 subjects.

The electrotherapy procedures (shock therapy) were supplemented by 50 minutes of medical gymnastics daily, performed under the physiotherapist's supervision. Group II, considered the control group, consisting of 10 people, did not benefit from shock therapy, but only physical therapy. All subjects signed a form agreeing to participate in the study, and the confidentiality of personal data was respected in the processing of the data.

Recommended physiotherapy procedures:

- Extracorporeal shock wave therapy (ESWT): 2000 shocks, at a pressure of 3–4 bar, frequency of 10–15 Hz, applied two times a week, performing a total of 5 sessions. When applying shocks, we used a special gel for ESWT. The physiotherapy procedures and the physiotherapy program were performed with high-performance BTL-6000 series equipment within the recovery and rehabilitation center.
- The physiotherapy programs were made up of exercises performed in the closed and open kinetic chain, the main goal being muscle toning and restoration of joint mobility.

PHASE I: (WEEK 1–3)—RECUPERATION OF MOBILITY

I. Passive mobilizations of the scapulohumeral joint in the dorsal decubitus

1. Flexie
2. Abduction
3. External rotation
4. Internal rotation
5. Scapular mobilizations (back shoulder rotation)

II. Self-passive exercises

1. Scripts—assisted by the healthy hand
2. Shoulder wheel
3. Self-passive exercises with the cane

III. Active exercises:

1. Birding the ball around the body

2. From the seat, the hand on the Bobath ball performs flexion-extension of the scapulohumeral joint

3. From the dorsal decubitus, the supinal outlet performs scapulohumeral flexion to the painful threshold

PHASE II: (WEEK 4–6)—RECUPERATION OF MUSCULAR FORCE

I. Self-passive exercises with a cane (heating):

a) abduction

b) flexion

c) extension

II. Active exercises

1. Birding the ball around the body

2. Running the Bobath ball on the trellis up

3. With the dumbbell of 1kg, the patient, runs (to the painful point)

4. Internal-external rotations with the elbow flexed at 90° (side decubitus)

5. Isometric exercises with Thelaband

a) flexion

b) abduction

6. Isometry on the pectoral muscle (adduction)—squeeze stalk the ball between the palms with 90° flexion of the scapulohumeral joint

7. CODMAN Pendulums

PHASE III: (WEEK 7–9)—RECOVERY OF MUSCULAR RESISTANCE AND CONTINUATION OF MUSCULAR FORCE GROWTH

I. Active heating

a) flexion

b) abduction

c) circumductions (antero-posterior)

II.1. Active exercises with 2kg (male) and 1kg (female)

a) flexion

b) abduction

c) slightly sloping extension

2. External rotations with 1kg at the trellis (shoulder and elbow flexed at 90°)

3. Internal rotations with resistance (Theraband)

4. Isometric exercises with Thelaband
a) flexion
b) abduction
5. Ramat with Posterior Theraband (shoulder and elbow flexed at 90°)
6. Floats with knee support
7. Adductions with Theraband over the chest
8. Isometry on the pectoral muscle
9. CODMAN Pendulums

PHASE IV: (WEEK 10–12)—RECOVERY OF EXPLOSIVE FORCE
I. Active heating
a) flexion
b) abduction
c) circumductions (antero-posterior)
II. Active exercises
1. Shoulder press with 2kg dumbbell
2. Ramat with dumbbell 4/5 kg
3. Explosive countertop movements:
a) adductions-abducts -15"/15" pause
b) flexes-extensions -15"/15" pause
4. Birding the ball around the body at the maximum mobility point - 15"/15" pause
5. Circumductions cotratime
a) previous -15"/15" pause
b) posterior -15"/15" pause
6.Thelaband abduction (flexed shoulder and added to 90°)
7.Throwing the ball to the wall
8. CODMAN Pendulums

Clinical-functional evaluation of patients was carried out at the beginning and end of each phase. The intensity of pain was evaluated on the visual analog scale. Using illustrations and scores, patients were asked to indicate the illustration that best corresponds to the condition they are experiencing. 0 describes the absence of pain, and 10 describes a high-intensity, unbearable pain.

The shoulders' joint balance was performed from the dorsal decubitus position to assess the active joint mobility. The term comparison was the angle of motion of the same segment of the opposite limb and the shared values of the maximum amplitudes of joint movements. The evaluation of the functionality of day-to-day activities was carried out using The Disabilities of the Arm, Shoulder, and Hand (DASH) Score. Based on 17 items related to the difficulty of carrying

out daily activities, the patient's functional condition is evaluated. The score is expressed in percentages, with values between 0 and 100. A lower score indicates a significant impairment of functional ***status.***

Results

Statistical analysis included descriptive statistics (frequency, average, median, standard deviation), and inferential statistics elements. The Shapiro-Wilk test was applied to determine the distribution of the analyzed data series. Comparing medium and medians was applied the t-Student test, parametric test for unpaired data, respectively the Mann-Whitney test, non-parametric test for unpaired data. The significance threshold chosen for the p-value was 0.05. The statistical analysis was performed using the GraphPad Prism trial variant utility.

Table 1. Research subjects

	Experimental group	**Control group**
Female gender	6	7
Male gender	4	3
Total	10	10

Table 2. Abduction weeks 1 and 4

ABDUCTION WEEK 1	**Experimental group**	**Control group**	**ABDUCTION WEEK 4**	**Experimental group**	**Control group**
Number of values	10	10	Number of values	10	10
Minimum	55,00	50,00	Minimum	85,00	70,00
25% Percentile	58,75	71,25	25% Percentile	93,75	93,75
Median	75,00	85,00	Median	115,0	112,5
75% Percentile	86,25	93,75	75% Percentile	126,3	121,3
Maximum	90,00	110,0	Maximum	130,0	130,0
Mean	73,00	83,00	Mean	110,5	108,5
Std. Deviation	13,78	18,44	Std. Deviation	16,91	18,42
Std. Error	4,359	5,831	Std. Error	5,346	5,824
Lower 95% CI of mean	63,14	69,81	Lower 95% CI of mean	98,41	95,33
Upper 95% CI of mean	82,86	96,19	Upper 95% CI of mean	122,6	121,7

Table Analyzed	Data 1	Table Analyzed	Data 2
Column A	Experimental group	Column A	Experimental group
vs	vs	vs	vs
Column B	Control group	Column B	Control group
Unpaired t test		Unpaired t test	
P value	0,1864	P value	0,8031
P value summary	ns	P value summary	ns
Are means signif. different? (P < 0.05)	No	Are means signif. different? (P < 0.05)	No

T-Student test, p>0.05, shows no statistically significant difference between the 1st-week abduction values' averages in the two lots.

T-Student test, p>0.05, shows no statistically significant difference between the 4th-week abduction values' averages in the two lots.

Table 3. Abduction weeks 8 and 12

ABDUCTION WEEK 8	**Experimental group**	**Control group**	**ABDUCTION WEEK 12**	**Experimental group**	**Control group**
Number of values	10	10	Number of values	10	10
Minimum	130,0	120,0	Minimum	170,0	145,0
25% Percentile	140,0	127,5	25% Percentile	175,0	153,8
Median	150,0	137,5	Median	177,5	155,0
75% Percentile	156,3	145,0	75% Percentile	180,0	160,0
Maximum	160,0	150,0	Maximum	180,0	165,0
Mean	148,5	136,0	Mean	177,0	156,0
Std. Deviation	9,733	10,75	Std. Deviation	3,496	5,676
Std. Error	3,078	3,399	Std. Error	1,106	1,795
Lower 95% CI of mean	141,5	128,3	Lower 95% CI of mean	174,5	151,9
Upper 95% CI of mean	155,5	143,7	Upper 95% CI of mean	179,5	160,1

Table Analyzed	Data 3	Table Analyzed	Data 4
Column A vs Column B	Experimental group vs Control group	Column A vs Column B	Experimental group vs Control group
Unpaired t test		Unpaired t test	
P value	0,0139	P value	0,0002
P value summary	*	P value summary	Gaussian Approximation ***
Are means signif. different? (P< 0.05)	Yes	Are means signif. different? (P< 0.05)	Yes

T-Student test, p>0.05, shows a statistically significant difference between the abduction score values' averages in week 8 in the two lots.

T-Student test, p>0.05, shows a statistically significant difference between the abduction score values' averages in week 12 in the two lots.

Table 4. VAS scale weeks 1 and 4

VAS SCALE WEEK 1	Experimental group	Control group	VAS SCALE WEEK 4	Experimental group	Control group
Number of values	10	10	Number of values	10	10
Minimum	6,000	6,000	Minimum	4,000	5,000
25% Percentile	7,000	7,000	25% Percentile	4,750	5,000
Median	8,000	8,000	Median	5,000	6,000
75% Percentile	9,000	9,000	75% Percentile	6,250	7,000
Maximum	10,00	10,00	Maximum	8,000	8,000
Mean	8,000	7,900	Mean	5,500	6,000
Std. Deviation	1,155	1,197	Std. Deviation	1,269	1,054
Std. Error	0,3651	0,3786	Std. Error	0,4014	0,3333
Lower 95% CI of mean	7,174	7,044	Lower 95% CI of mean	4,592	5,246
Upper 95% CI of mean	8,826	8,756	Upper 95% CI of mean	6,408	6,754

Table Analyzed	Data 5	Table Analyzed	Data 6
Column A vs Column B	Experimental group vs Control group	Column A vs Column B	Experimental group vs Control group
	Unpaired t test		Unpaired t test
P value	0,8513	P value	0,3506
P value summary	ns	P value summary	ns
Are means signif. different? (P < 0.05)	No	Are means signif. different? (P < 0.05)	No

T-Student test, p>0.05, shows no statistically significant difference between the VAS score values' averages in week 1 in the two lots.

T-Student test, p>0.05, shows no statistically significant difference between the VAS score values' averages in week 4 in the two lots.

Table 5. VAS scale weeks 8 and 12

VAS SCALE WEEK 8	**Experimental group**	**Control group**	**VAS SCALE WEEK 12**	**Experimental group**	**Control group**
Number of values	10	10	Number of values	10	10
Minimum	2,000	3,000	Minimum	0,0	2,000
25% Percentile	2,750	4,000	25% Percentile	0,0	3,000
Median	3,000	5,000	Median	0,0	3,500
75% Percentile	4,000	5,250	75% Percentile	1,000	4,000
Maximum	7,000	6,000	Maximum	1,000	4,000
Mean	3,400	4,800	Mean	0,3000	3,400
Std. Deviation	1,430	0,9189	Std. Deviation	0,4830	0,6992
Std. Error	0,4522	0,2906	Std. Error	0,1528	0,2211
Lower 95% CI of mean	7,174	7,044	Lower 95% CI of mean	-0,04555	2,900
Upper 95% CI of mean	8,826	8,756	Upper 95% CI of mean	0,6456	3,900

Table Analyzed	Data 7	Table Analyzed	Data 8
Column A vs Column B	Experimental group vs Control group	Column A vs Column B	Experimental group vs Control group
	Unpaired t test		Unpaired t test
P value	0,0111	P value	0,0001
P value summary	Gaussian Approximation	P value summary	Gaussian Approximation
Are means signif. different? (P < 0.05)	Yes	Are means signif. different? (P < 0.05)	Yes

T-Student test, p>0.05, shows a statistically significant difference between the VAS score values' averages in week 8 in the two lots.

T-Student test, p>0.05, shows a statistically significant difference between the VAS score values' averages in week 12 in the two lots.

Table 6. DASH scale weeks 1 and 4

DASH SCALE WEEK 1	**Experimental group**	**Control group**	**DASH SCALE WEEK 4**	**Experimental group**	**Control group**
Number of values	10	10	Number of values	10	10
Minimum	58,70	58,50	Minimum	46,10	40,10
25% Percentile	62,85	60,45	25% Percentile	47,98	42,08
Median	69,95	64,85	Median	51,05	46,85
75% Percentile	79,20	71,08	75% Percentile	56,20	57,88
Maximum	81,30	75,30	Maximum	62,60	60,20
Mean	69,93	65,85	Mean	52,55	49,05
Std. Deviation	8,250	6,035	Std. Deviation	5,484	7,811
Std. Error	2,609	1,909	Std. Error	1,734	2,470
Lower 95% CI of mean	64,03	61,53	Lower 95% CI of mean	48,63	43,46
Upper 95% CI of mean	75,83	70,17	Upper 95% CI of mean	56,47	54,64

Table Analyzed	Data 9	Table Analyzed	Data 10
Column A vs Column B	Experimental group vs Control group	Column A vs Column B	Experimental group vs Control group
Unpaired t test		Unpaired t test	
P value	0,2230	P value	0,2613
P value summary	ns	P value summary	ns
Are means signif. different? (P < 0.05)	No	Are means signif. different? (P < 0.05)	No

T-Student test, p>0.05, shows no statistically significant difference between the DASH score values' averages in week 1 in the two lots.

T-Student test, p>0.05, shows no statistically significant difference between the DASH score values' averages in week 4 in the two lots.

Table 7. DASH scale weeks 8 and 12

DASH SCALE WEEK 8	Experimental group	Control group	DASH SCALE WEEK 12	Experimental group	Control group
Number of values	10	10	Number of values	10	10
Minimum	20,80	26,40	Minimum	5,300	17,60
25% Percentile	25,68	28,30	25% Percentile	8,925	18,63
Median	33,20	31,60	Median	10,80	20,10
75% Percentile	38,78	38,63	75% Percentile	16,70	20,83
Maximum	44,30	44,90	Maximum	19,60	29,70
Mean	32,68	33,40	Mean	12,12	20,68
Std. Deviation	7,633	6,158	Std. Deviation	4,491	3,363
Std. Error	2,414	1,947	Std. Error	1,420	1,064
Lower 95% CI of mean	27,22	28,99	Lower 95% CI of mean	8,908	18,27
Upper 95% CI of mean	38,14	37,81	Upper 95% CI of mean	15,33	23,09

Table Analyzed	Data 11	Table Analyzed	Data 12
Column A vs Column B	Experimental group vs Control group	Column A vs Column B	Experimental group vs Control group
	Unpaired t test		Unpaired t test
P value	0,8190	P value	0,0005
P value summary	ns	P value summary	Gaussian Approximation
Are means signif. different? (P < 0.05)	No	Are means signif. different? (P < 0.05)	Yes

T-Student test, p>0.05, shows no statistically significant difference between the DASH score values' averages in week 8 in the two lots.

T-Student test, p>0.05, shows a statistically significant difference between the DASH score values' averages in week 12 in the two lots.

Discussions

Our study shows that extracorporeal shock wave therapy of calcified shoulder tendinitis is useful in the long term compared to kinetic treatment. A lot of research has illustrated the effectivity of extracorporeal shock wave therapy (ESWT), either focal (FESWT) or radial (RESWT), in calciferous shoulder tendinopathy. ESWT is predicated on the deployment of individual stress poundings or shock waves. Through American or Radiographic guidelines, they are focused on calcification. ESWT enjoys appeared posted to provide respectable outcomes. However, there appear no Level 1 statements in the literature. Lee and collaborators, in a methodical investigation, published acceptable testimony endorsing the usage of FESWT.

We recommend physical-kinetic treatment in the case of calcified Tendinitis in the shoulder. It is known that nowadays, the most used is pharmacological treatment by the administration of nonsteroidal anti-inflammatory drugs. These drugs can give gastric, hepatic, cardiovascular, hematological, or renal side effects. Physiotherapy procedures are non-invasive, free of adverse effects if precise indications and contraindications have been taken into account when prescribing them. The physical—kinetic treatment provides all the elements that constitute the picture of safe and accurate recovery in current pathologies.

Calcific Tendinitis of the shoulder is a complicated situation to supervise with different therapy alternatives. (ElShewy, 2016) While concrete footpaths reside for supervision, this research is a possibility to showcase regulations and treatment. With the assistance of the patient's status, occupation, VAS pain scorelines, the timespan of treatment compensation, the number of patient visits, and our present administration footpaths, we have assembled an algorithm that may be observed as a criterion by our elementary care physicians patients with alleged calcific Tendinitis. There may be some incidents that might differ and might be customized to be regarded as patient-specific as required (ElShewy, 2016; Raja et al; 2019).

Calcifying Tendinitis of the rotator cuff is a prevalent condition of the shoulder. Women are more commonly involved than men (Balke, 2012; Castagna, 2016). The medical scorelines (Constant, ASES, UCLA, VAS, SST) enhanced considerably in between baseline and six months postoperatively sans any disparity among the two groups (Constant, 1987; Castagna, 2016). Additionally, following six months, both groups also demonstrated clinical enhancements (Castagna, 2016).

Conclusions

Following the study, the hypotheses were confirmed. Extracorporeal shock wave therapy combined with kinetic treatment has been more effective in the long term than the kinetic program to improve the algal component and increase the functional level. Extracorporeal shock waves, by mechanical effect, produce a slight dislocation of calcium crystals deposited in the tendon of the supraspinous muscle and, at the same time, produce neovascularization in the area affected by chronic inflammation. Kinetic treatment ensures improvement of the algal component and functional parameters, thus ensuring the patient's quality of life by combating muscle contractions and increasing joint mobility.

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