Sore Shoulder in Physical Practice

Džemal Pecar[1*], Muzafer Mujić[2], Muris Pecar[1]

1. Policlinic "Praxis", Center for physical medicine and rehabilitation, Ćumurija 3, 71 000 Sarajevo, Bosnia and Herzegovina
2. University of Sarajevo, School of Medicine, Čekaluša 90, 71 000 Sarajevo, Bosnia and Herzegovina

* Corresponding author

Abstract

Sore shoulder or shoulder region is frequently encountered in general population. According to reference data prevalence ranges between 15 and 20% in 40-45 age group. A weak bone support enables extensive excursions of this joint and simultaneously reduces its stability. We analyzed successfulness of sore shoulder treatment in a sample of 1115 patients treated in the Center for physical medicine and rehabilitation between 1996 and 2004. All the patients reported to the Center either in acute phase or in the phase of chronic state exacerbation, with limited function that was graded on the scale 0 to 5. Type and kind of sore shoulder cause was determined by clinical examination and, where needed, by X-ray. Of the total number of cases, 33 patients did not report for follow up examination, 166 patients were forwarded to other physical therapy centers for treatment so the final analysis included 916 patients (82%) whose treatment success was evaluated on the scale 0 to 5. In 659 (58%) patients the inflammation of musculus biceps long tendon was identified as a cause of sore shoulder. The least frequent cause was the blow syndrome (impingement) - 20 (2%). In 666 patients (73%) the problem was resolved by local instillation of depo corticosteroids (Betamethason 7 mg) so the physical treatment was not required.

KEY WORDS: sore shoulder, sore shoulder treatment

Introduction

Sore shoulder or shoulder region is frequently encountered in general population. According to reference data prevalence ranges between 15 and 20% in 40-45 age group. A weak bone support enables extensive excursions of this joint and simultaneously reduces its stability. Considering that shoulder movement is supported by numerous joints (gleno-humeral, sterno-clavicular, acromio-clavicular, scapulo-humeral) as well as soft tissues, anatomical and biomechanical complexity of shoulder region may hinder evaluation and treatment of shoulder dysfunction. Therefore, detailed evaluation of each of the mentioned structures is of utmost importance. Evaluation of spine function in jugular area is of particular importance considering that its dysfunction frequently causes referral shoulder pain.

Material And Methods

We analyzed the results of the treatment of patients suffering from sore shoulder in polyclinic Praxis, in the period 1996 - 2004. The treatment outcome was evaluated by successfulness estimation. The treatment success is given as an assessment of clinical condition after the treatment objectively evaluated according to the following scale:

1. grade «0» zero: condition unchanged (no results),
2. grade «2»: minimal improvement,
3. grade «3»: satisfactory functional improvement with sequels (sensory or motorical),
4. grade «4»: good improvement and satisfactory functional restitution with minimal sequels,
5. grade «5»: good restitution without consequences of injury or illness.

By retrospective analysis we thus registered and sorted all the patients with sore shoulder who were treated with local instillation and physical therapy procedures in physical medicine polyclinic "Praxis". Accompanying clinical findings and physiological measurements such as functional tests, muscle tonus, pain intensity were used in treatment success evaluation for each individual patient according to the given scale. The data are statistically analyzed and presented in Tables and Charts.

Results And Discussion

Between 1996 and 2004 total of 1115 patients reported for examination in the Center for physical medicine and rehabilitation "Praxis". Table 1 and Chart

Reported for treatment	48 patients with dg: M75.5
Reported for treatment	20 patients with dg: M75.4
Reported for treatment	30 patients with dg: M75.3
Reported for treatment	659 patients with dg: M75.2
Reported for treatment	229 patients with dg: M75.1
Reported for treatment	129 patients with dg: M75.0
TOTAL M75.	1.115 patients

TABLE 1. Diagnosis structure in shoulder periarthritis

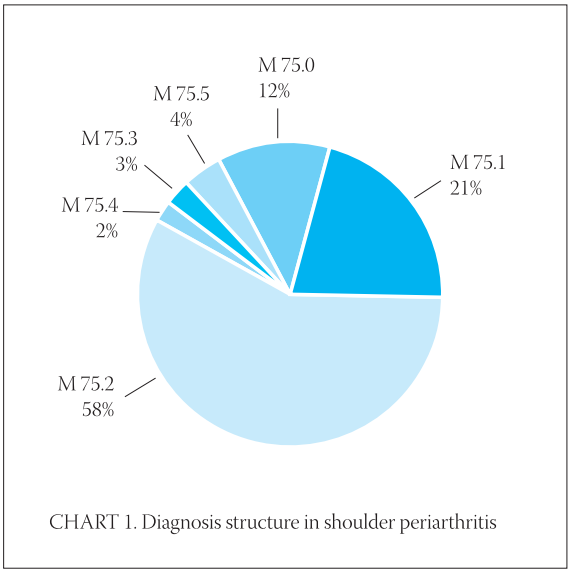

CHART 1. Diagnosis structure in shoulder periarthritis

MALE	538
FEMALE	575
CHILD 7 YEARS AND YOUNGER	2
CHILD 14 YEARS AND YOUNGER	0

TABLE 2. Sex structure

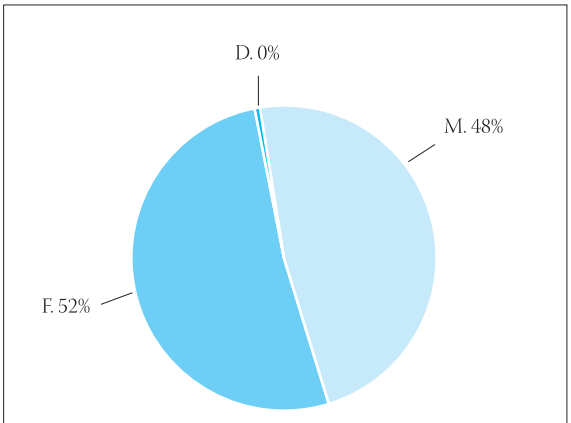

CHART 2. Sex structure

00-07	08-14	15-24	25-34	35-44	45-54	55-64	65-99
2	2	15	75	177	353	329	162

TABLE 3. Age structure

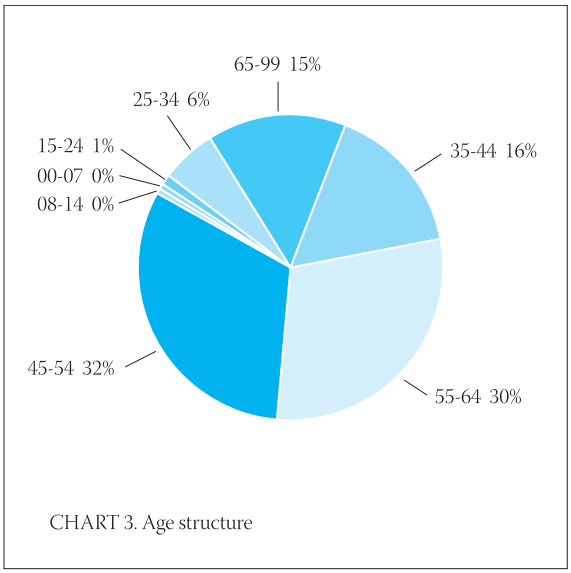

CHART 3. Age structure

1 illustrate numerical data on structure and type of sore shoulder causes. Inflammation of long tendon of musculus biceps was identified as sore shoulder cause in 659 (58%) patients. The least frequent cause was the blow syndrome (impingement) - 20 (2%). Table 2 and Chart 2 represent sex structure of the patients that reported for checkup. The structure is quite balanced with slight prevalence of female patients.

Total of 1115 patients with dg. M75 reported for examination and treatment

Subjected to physical treatment in "Praxis" polyclinic: 250 patients (22,4%)
Forwarded to other centers for physical treatment: 166 patients (14,8%)
Subjected to physical treatment: 416 patients (35,2%)
Did not report for follow up examination after the intervention: 33 patients (2,9%)
Completed the treatment and evaluated: 916 patients (82,1%)
Relapse: 53 patients (4,1%)

Type and kind of sore shoulder cause was determined by clinical examination and, where needed, by X-ray. Of the total number of cases, 33 patients did not report for follow up examination, 166 patients were forwarded to other physical therapy centers for treatment so the final analysis included 916 patients (82%) whose treatment success was evaluated on the scale 0 to 5. Evaluation of treatment success is presented in Table 5 and Chart 5. It is evident that 827 (90%) patients were successfully treated with grade 4 and 5

0	2	3	4	5
2	2	85	530	297

TABLE 5. Treatment results - "Praxis"

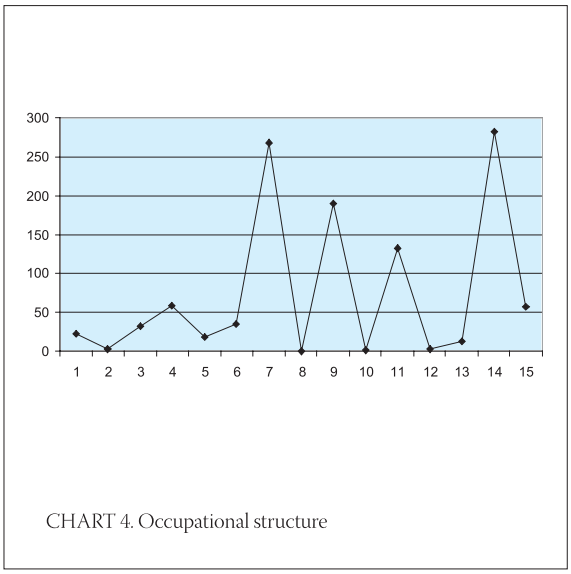

CHART 4. Occupational structure

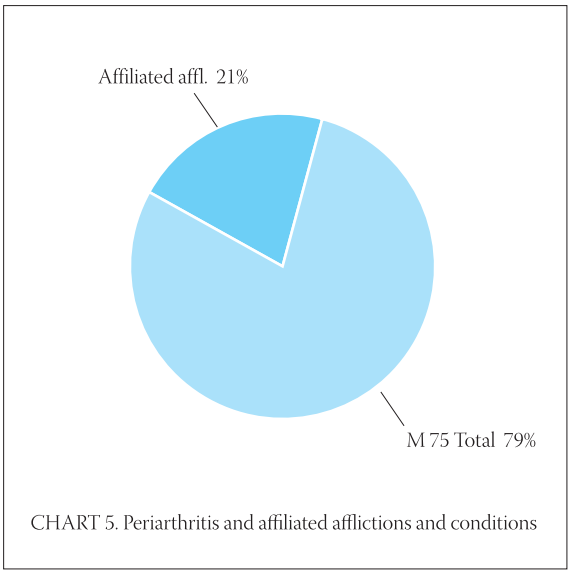

CHART 5. Periarthritis and affiliated afflictions and conditions

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
22	3	32	59	18	35	268	0	190	1	133	3	12	286	57

TABLE 4. Occupational structure

1. LOCAL INSTILLATION FLOSTERON-A (BETAMETHASON 7 MG)		989 (87%)
2. MANUAL THERAPY		158 (14%)
3. ACUPUNCTURE		150 (13%)
4. PHYSICAL THERAPY		250 (23%)
TOTAL PROCEDURES	16.025	64 procedures /patient
AVERAGE TREATMENT		16 days
PASSIVE EXERCISES	1943	
ACTIVELY SUPPORTED EXERCISES	2207	
ACTIVE EXERCISES WITH WORKLOAD	68	
EXERCISES IN ROTATING CIRCLE	983	
SPECIAL EXERCISES FOR SPINE CORRECTION	133	
GALVANIC CURRENT THERAPY	40	
GALVANIC CURRENT UNDERWATER THERAPY - LOCAL	123	
DIADYNAMIC CURRENT THERAPY	1722	
ELECTROSTIMULATION - INDIVIDUAL NERVE - BIPOLAR	9	
ELECTROSTIMULATION - INDIVIDUAL NERVE - MONOPOLAR	2	
INFRARED RAYS THERAPY	10	
INTERFERENCE CURRENTS THERAPY	135	
ULTRASOUND THERAPY	1589	
MANUAL MASSAGE OF INDIVIDUAL REGION	1958	
MANUAL MASSAGE - GENERAL	22	
VACUUM MASSAGE	130	
HYDROCOLATOR THERAPY - REGIONAL	2931	
PARAFFIN THERAPY - REGIONAL	332	
TENS	1688	

TREATMENT "PRAXIS"

2 to 7	8 to 15	16 to 21	22 to 30	31 to 60	61 to 90
310	294	84	93	97	30

TABLE 6. Treatment length

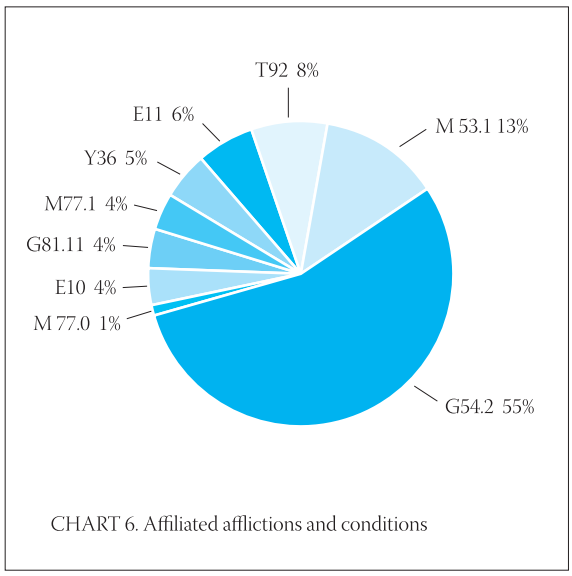

CHART 6. Affiliated afflictions and conditions

Conclusions

Between 1996 and 2004 total of 1115 cases of sore shoulder were registered in the Polyclinic for physical medicine and rehabilitation "Praxis". 916 patients were treated and analyzed. 33 patients did not report for follow up examination while 166 were forwarded to other centers for physical treatment. Inflammation of long tendon of musculus biceps (M75.2) was identified as sore shoulder cause in 659 (58%) patients. The least frequent cause was the blow syndrome (impingement) - 20 (2%). Most of the patients (989 - 87%) were treated by local instillation of depo-corticosteroids (Betamethason 7 mg). Thus, only 416 (37%) patients required physical treatment (250 patients in Praxis polyclinic and 166 in other centers). In 666 patients (73%) the problem was resolved without physical treatment. Affiliated afflictions are frequent problem with sore shoulder (359 cases or 32.2%). Amongst those, the most frequent affliction is cervical syndrome (36.5%) which requires more complex treatment that involves manual treatment, acupuncture and physical treatment. Evaluation of treatment success is presented in Table 5 and Chart 5. It is evident that 827 (90%) patients were successfully treated with grade 4 and 5. Excellent result (clinical findings evaluation 5 and 4) were achieved in 90% patients in the analyzed sample of 916 cases. Minimal improvement or no result was assigned in 4 patients or 0.4 %.

References

(1) Bettman H.E. Orthopadic disorders, in Disability and Rehabilitation, Handbook, Copyright, by Mc Graw Hill, Inc. 1978, New York.
(2) Kisner C., Colbi L.A. Therapeutic Exercise, Foundation and Techniques, Third edition, F.A. Davis, 1996.
(3) Magee D.J. Orthopedic Physical Assesment, W.B. Saunders 1987.
(4) Pecar, Dz. Manuel Therapy in Pain Management Seminar Series, proceedings 1997., Volume II., 65-68.
(5) Pecar Dz. Ocjena modela baze podataka za fizikalnu rehabilitaciju u zajednici, magistarski rad, Medicinski fakultet Univerziteta u Sarajevu, poseban tisak, 2000. god.
(6) Richardson J.K., Iglarsh Z.A. Clinical Oortophedic Physical Therapy, W.B. Saunders, 1994.
(7) Rosandich P.A., Kelley J.T., Conn D.L. Perioperative management of patients with rheumatoid arthritis in the era of biologic response modifiers. Curr. Opin. Rheumatol. 2004; 16(3):192-198.