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 successfullness 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»: condition unchanged (no results),
2. grade «1»: minimal improvement,
3. grade «2»: satisfactory functional improvement with sequel (sensory or motorical),
4. grade «3»: good improvement and satisfactory functional restitution with minimal sequel,
5. grade «4»: 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
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 | 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.

<p>| TABLE 5. Treatment results - &quot;Praxis&quot; |</p>
<table>
<thead>
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<td>85</td>
<td>530</td>
<td>297</td>
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| TABLE 6. Occupational structure |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 22 | 3 | 32 | 59 | 18 | 35 | 268 | 0 | 190 | 1 | 133 |

| CHART 3. Age structure |

| CHART 4. Occupational structure |

| CHART 5. Periarthritis and affiliated afflictions and conditions |
1. LOCAL INSTILLATION FLOSTERN-A (BETAMETHASON 7 MG) 989 (87%)
2. MANUAL THERAPY 158 (14%)
3. ACUPUNCTURE 150 (13%)
4. PHYSICAL THERAPY 250 (21%)

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
HYDROCATOR THERAPY - REGIONAL 2931
PARAFFIN THERAPY - REGIONAL 332
TENS 1688

TREATMENT "PRAXIS"

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<td>84</td>
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TABLE 6. Treatment length

![Chart 6. Affiliated afflictions and conditions](image-url)
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