Slow Release Diclofenac Sodium (Voltaren) in Soft Tissue Rheumatism-A Multicentre Trial

Pages with reference to book, From 95 To 99

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Abstract

One hundred and thirty four patients suffering from Soft Tissue Rheumatism were selected and treated with a single morning dose of Diclofenac Sodium (Voltaren SR 100) for duration of two weeks. No other antirheumatic medication or analgesic was permitted during the study period.

Evaluation of the patient's condition at each visit was made on a four point scale. At the end of two weeks of treatment, patient gave his own evaluation on the effectiveness of treatment and physician made his final assessment.

After one week of treatment, symptom scores, in all their target symptoms, were decreased in 80% of patients. After two weeks of treatment symptom scores had decreased in 90% of patients, and of these 55% were totally symptom free, and another 35% of patients had shown improvement in their symptoms. The medication was evaluated by the physician to be very effective in 81 patients (60.5%), moderately effective in 48(36%) and ineffective in only 5 (3.5%) patients. Side effects were observed in 14 patients (10%); they were transient, of mild nature, and in no instance did the treatment have to be prematurely discontinued because of side effects.

The result of this study suggests that Voltaren SR 100 is a preparation which combines great efficacy and good tolerability with ease of dosage compliance and is very suitable under ambulatory out-patient or general practice treatment of Soft Tissue Rheumatism (JPMA 33: 95, 1983).

Introduction

Soft tissue rheumatism (also known as nonarticular rheumatism) is a general term given to a group of diseases characterised by pain and tenderness of the musculoskeletal soft tissue not related to the regional joint or to systemic diseases. Any of the soft tissues such as tendons, muscles, bursae, or fibrous structures, may be affected either alone or in combination. Conditions affecting the musculature, tendons, tendon sheaths, ligaments, fascia and bursae are particularly important in general practice. Diseases of these tissues can appear idiopathically, but are more often symptoms of various basic conditions e.g. faulty posture or degenerative processes that wear out the skeletal system.

Pain is the common denomenator of rheumatism of soft tissues, being caused by muscular spasm or increased intensity of reflex muscular spasm. The aim of medication is to break the vicious circle of increased muscle tone-ischaemia hypoxia - acidosis - myalgia. Though simple analgesics often fail, antirheumatic agents with a definite anti-inflammatory action are more effective.

In general practice, soft tissue rheumatism is an extremely common ailment. It thus becomes necessary to test new antirheumatic from this point of view.

VOLTAREN, whose active substance, dic lofenac sodium, has a new type of chemical structure, has already shown itself to be a remarkably well tolerated substance in a series of investigations on inflammatory rheumatism.

The problem of patient compliance is well known; various authors have reported that the percentage of patients making errors in self-administration of presented medication ranges between 60% and 93% (Vesta Marston, 1970; Stewart and Leighton, 1972; Mazzullo et al., 1974). Patient compliance is increased when the frequency and thus the complexity of drug intake is reduccd(Haynes, 1976; Porter, 1969; Schwartz etal., 1962).

Hence it was decided to determine efficacy and tolerability of a single morning dose of VOLTAREN SR 100 in soft tissue rheumatism.

Patients & Methods

Each consultant or general practitioner selected five patients of either sex between 20 to 65 years of age, suffering from soft tissue rheumatism. Patients with heart failure, diabetes, peptic ulcer, severe liver or renal discase, or asthma, as well as women of child-bearing potential were excluded from the study.

The patient received a single morning dose of VOLTAREN SR100. No other antirheumatic medication or analgesic was permitted during the study period. The patient visited the physician at the beginning of the trial and after one and two weeks of treatment. Evaluation of the patient's condition at each visit was made on a four point scale by the physician as follows: 0= Absent 1 = Mild 2 Moderate 3=Sevcre for each of the following target signs/symptoms a)Pain at rest, b)Pain on movement, c)Swelling, d)Local tenderness, e) Functional impairment, f) Limitation of movement, g) Sleep disturbed by pain. These were rated at each visit, and unwanted effects were recorded at each visit according to their severity and the probability of being caused by trial medication.

At the initial visit, patient characteristics and any previous treatment of rheumatic disease was recorded.

In order to guarantee a uniform evaluation of the finding, the patients were divided into the following four diagnostic sub-groups according to localization of symptoms.

a) Soft tissue rheumatism of vertebral musculature.
b) Soft tissue rheumatism of shoulder region.
c) Other soft tissue rheumatism (Myositis, Tendornyositis. Bursitis).
d) Soft tissue rheumatism unspecified.

At the end of two weeks of treatment, the patient gave his own evaluation on the effectiveness of the treatment, and the physician then made his final assessment of the therapeutic results.

Results

There were 134 patients in the final analysis: 59 males and 75 females with an average age of 45.5 years (range 15-80 years).

Table I Age Distribution of 134 Patients

Age group	Number of patients
Below 20 years	9
21 – 30 years	22
31 – 40 years	34
41 – 50 years	31
51 – 60 years	21
Above 60 years	17

Table I shows the age distribution of the patients.
The duration of disease varied from one week to two years and is shown in Table II.

Table II Duration of Soft Tissue Rheumatism

Duration	Number of patients
Less than 1 month	58
1 – 2 months	22
3 – 5 months	17
6 – 11 months	10
More than 12 months	15
Duration not known	12

Table III

Distribution of Patients in Diagnostic Sub-groups

I.	Soft Tissue Rheumatism of Vertebral Musculature (Tension Neck, Lumbago, Cervical syndrome)	– 50
II.	Soft Tissue Rheumatism of Shoulder Region (Frozen shoulder, Humeroscapular periarthritis)	– 19
III.	Other Soft Tissue Rheumatism (Myositis, Tendomyositis, Bursitis etc.)	– 43
IV.	Soft Tissue Rheumatism (un-specified)	– 22

Table III shows the distribution of patients in the four diagnostic sub-groups.
Changes recorded in the seven target symptoms during treatment are shown in Table IV.

Table IV

Assessment of Action of Voltaren SR 100 on the Symptoms of Soft Tissue Rheumatism after One & Two Weeks of treatment (Total No. of Patients 134)

No. of patients presenting the symptoms before treatment	After One week of treatment						After two weeks of treatment					
	Symptom-Free		Improved		Unchanged		Symptom-Free		Improved		Unchanged	
	n	%	n	%	n	%	n	%	n	%	n	%
1. Pain at Rest 124	60	48.5	49	39.5	15	12	96	77.5	26	21	2	1.5
2. Pain on Movement 128	22	17.0	85	66.5	21	16.5	69	54.0	53	41.0	6	5
3. Swelling 56	20	36.0	26	46.0	10	18	30	54.0	22	39.0	4	7.0
4. Local Tenderness 110	40	36.0	48	44.0	22	20	81	74.0	22	20.00	7	6.0
5. Functional Impairment 117	29	25.0	64	55.0	24	20.0	71	61.0	40	34.0	6	5
6. Limitation of Movement 123	34	28.0	58	47.0	31	25.0	82	67.0	30	24.5	11	8.5
7. Sleep Disturbed by Pain 102	55	54.5	28	27.0	19	18.5	83	81.0	14	14.0	5	5

Symptoms showing most rapid improvement were pain at rest, pain on movement, and sleep disturbed by pain.
After one week of treatment 88% and after two weeks 98% of patients considered the pain at rest to be distinctly improved or their condition to be symptom free. The corresponding figures for the symptom pain on movement were 83% and 95% after one and two weeks of treatment respectively.

After one week of treatment symptom scores, for all their target symptoms, were decreased in 80% of patients, while after two weeks of treatment symptom score had decreased in 90% of patients, and of these 55% were totally symptom free and another 35% had shown improvement in their symptoms. As regards the evaluation of efficacy of the medication by the patients themselves the drug was found to be very effective in 76 (57%), moderately effective in 53 (39.5%) and ineffective in only 5 (3.5%) patients.

The medication was reported to be very effective by physicians in 81(60.5%), moderately effective in 48 (36%) and ineffective in only 5 (3.5%) patients.

Results amongst the four diagnostic subgroups are shown in Table V.

Table V Doctors Evaluation of Medication in Diagnostic Sub-groups

	Diagnostic group	Very Effective	Moderately effective	Ineffective
I.	Soft Tissue Rheumatism of Vertebral musculature	74%	22%	4%
II.	Soft Tissue Rheumatism of Shoulder Region	47.5%	47.5%	5%
III.	Other soft tissue rheumatism (Myositis, Tendomyositis, Bursitis etc.)	56%	42%	2%
IV.	Soft Tissue Rheumatism (un- specified)	50%	45.5%	4.5%

The drug gave best results in soft tissue rheumatism of vertebral musculature, where it was foun'd to be very effective in 74%, moderately effective in 22% and ineffective in 4% of patients.

The nature and severity of the unwanted effects, probably associated with trial medication arc indicated in Table VI.

Table VI Unwanted Effects

Unwanted Effect	Number of patients	Severity
Burning & pain in epigastrium	7	Mild
Diarrhoea	2	"
Nausea	2	"
Ringing of Ear	1	"
Dizziness	1	"
Burning sensation of hand & mouth	1	"

The side-effects were observed in 14 patients (10%), they were transient, of mild nature, and were mainly restricted to gastrointestinal system. in no instance did the treatment have to be prematurely discontinued because of side-effects.

Discussion

This open, non-comparative trial in general practice largely confirms the results of the controlled trials that were mainly conducted in hospitals under double-blind conditions. The sources of error in such open, non-comparative trials are well known. Clinical trials are often conducted under atypical conditions whether in hospitals, highly specialized departments or involving selection of patients, and therefore only give an incomplete picture of a drug's therapeutic spectrum of efficacy and possible side-effects.

A trial under conditions of general practice can, on the other hand, provide valuable data concerning the action, dosage and tolerability of a newly-introduced therapeutic agent under everyday working conditions and therefore more accurately reflects the patterns of efficacy and tolerability that will obtain in clinical practice.

The results of this study confirm the finding of other authors (Ghazi and Fowler, 1973) and show that VOLTAREN SR100 is a very effective drug. It also confirms the excellent tolerability of the drug reported by other authors (Mauracher and Dannhorn,1976; Valtonen, 1978; Vogt,1976).

Our impression of diclofcnac sodium as a highly effective symptomatic antirheumatic agent corresponds with the experiences of other investigatory groups (Bethlen et al., 1976; Schubiger et al., 1980; Vogt, 1976).

Accordingly in our opinion, VOLTAREN SR 100 is a preparation which combines great efficacy and good tolerability with ease of dosage compliance, and is very suitable for arnbulaiory out-patient or general practice treatment of soft tissue rheumatism.

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