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All Authors disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding.

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Any statement relating to studies on humans and animals is not required for this type of study. All patients gave the informed consent prior to being included in the study. All procedures involving human participants were in accordance with the 1964 Helsinki declaration and its later amendments.

Introduction: Acute or chronic lumbar pain is very disabling and it negatively affects quality of life. There are several guidelines related to the management of low back pain (LBP), but some studies on the quality of care, provided in the field of general medicine, are judged to be in contrast with them. The objective of this study is to analyze the management of the LBP in the practice of Italian general medicine and compare it with the recommendations of the guidelines.

Materials and methods: In this observational study, in a general medical center, 50 patients suffering from chronic LBP were enrolled. All patients, assessed on a case-by-case basis, have been given personalized therapies for their LBP, according to SIOT guidelines in agreement between orthopedic and general practitioner. The monitoring took place over a period of 12 weeks. We evaluated: adherence to therapy; consumption of pain medication daily, second-level diagnostic tests performed post-therapy; The Short Form (12) Health Survey for the evaluation of the quality of life; the VAS for pain and Oswestry Low Back Pain Score for the objective evaluation of the quality of life related to the lumbar spine.

Results: In the 35 (70%) patients who adhered to the therapy according to guidelines we had an increase in quality of life, a reduction in pain, a decrease in drug therapy and the performance of II level diagnostic tests compared to 15 (30%) who did not adhere to the therapy according to guidelines. However, in both groups an increase in drug consumption was seen 6 months after the evaluation endpoint.

Conclusions: The family doctor plays a fundamental role in the management of chronic pain.

Patient education plays a key role in therapy and favorable outcomes in patients with LBP.

Key Word: low back pain; family medicine; pain killer; physiotherapy; young; adult; elderly.

INTRODUCTION

Low back pain (LBP) is a universal human experience -- almost everyone has it at some point. The lower back, which starts below the ribcage, is called the lumbar region. Pain here can be intense and is one of the top causes of missed work [1]. Symptoms range from a dull ache to a stabbing or shooting sensation. The pain may make it hard to move or stand up straight. Acute back pain comes on suddenly, often after an injury from sports or heavy lifting. Pain that lasts more than three months is considered chronic [2,3]. The treatment of patients with low back pain in general practice constitutes an additional problem. Both recent onset and chronic cases are presented, implying that patients have already undergone some part of the course at the moment they decide to consult the general practitioner. Consequently, studying the course of low back pain presented in general practice should also include gathering information

on the pre-clinical course [4]. Fortunately, low back pain often gets better on its own. When it doesn't, there are effective treatments [5]. The objective of this study is to analyze the management of the LBP in the practice of Italian general medicine and compare it with the recommendations of the guidelines.

MATERIALS AND METHODS

From January 2017 to December 2018. We screened 1.500 patients treated at a general practice, from whom we enrolled 50 patients with chronic LBP

After using the following exclusion criteria: hematological or oncological patients; acute or chronic infections; acute low back pain previous spine fractures; previous spinal surgery, age under 16 years, bone metabolism disease, rheumatoid disease.

The enrolled patients were described in Table.1.

Table 1. Description of General population

Description General Population	
Number of Patients	50
Average age, years (standard deviation)	52.58(±13.24)
Range of age years	20-73
Gender Ratio (male:female)	0.67(20:30)
Prevoious Type of Low Back Pain: N(%)	Acute 50(100%)
Type of Occupation	Agricultural Activity: 15 (30.00%) Industrial Sector: 15 (30.00%) Tertiary Industry: 10 (20.00%) Unemployed:7(14%) Students: 3(6%)

All patients were informed in a clear and comprehensive way of the type of treatment (see drug protocol). Patients were treated according to the ethical standards of the Helsinki Declaration.

All patients underwent the same rehabilitation protocol (see rehabilitation protocol). The criteria to evaluate the patients groups during the follow-up were; to evaluate: adherence to the therapy; the consumption of daily pain medication; the second level diagnostic exams carried out post therapy; subjective and objective quality of life and the lumbar spine function measured by the Oswestry Low Back Pain Questionnaire Score(OLBPQS) [6], the subjective and objective quality of life The Short Form (12) Health Survey [6]; and Visual Analogue Scale(VAS) for pain[6].

The evaluation endpoint was set to 6 months after the start of drugs protocol and rehabilitation protocol.

STATISTICAL ANALYSIS

Descriptive statistics were used to summarize the characteristics of the study group and subgroups, including means and standard deviations of all continuous variables. The t test was used to compare continuous outcomes. The Fisher, in this groups are smaller than 10 patients, exact test were used to compare Categorical variables. The statistical significance was defined as $p < 0.05$. The predictive score of outcomes and quality of life and their standard deviations were approximated at the first decimal while at the second decimal was approximated Pearson correlation coefficient (r). The reliability and validity of the correlation between functional osteosynthesis and bone healing were determined by the Cohen's kappa(k).

Drugs Protocol

The aim of our protocol with Etoricoxib is providing the clinician an orientation of a daily rehabilitation course, and to standardize and direct the whole patient population follow a single physio-kinesiotherapy program to reduce the bias.

Etoricoxib 120 mg 1 cp/die for the first 5 days after pain reactivation, then 90 mg 1 cp/die for 10 days, and finally 60 mg 1 cp/die for 15 days.

Rehabilitation Protocol

The aim of our protocol is to provide the clinician an orientation of a daily rehabilitation course, and to standardize and direct the whole patient population follow a single physio-kinesiotherapy program to reduce the bias.

Bottom to heels stretch

Start position: Kneel on all fours, with your knees under your hips and hands under your shoulders. Try to keep your back and neck fairly straight, and don't lock your elbows.

Action: Slowly move your bottom back towards your heels. Hold the stretch for one deep breath and return to the starting position.

Repeat 8 to 10 times.

Tips: avoid going right back onto your heels if you have a knee problem

ensure correct positioning with the help of a mirror

only stretch as far as it feels comfortable

Knee rolls

Start position: Lie on your back. Place a small flat cushion or book under your head. Keep your knees bent and together. Keep your upper body relaxed and your chin gently tucked in.

Action: Roll your knees to one side, keeping both shoulders on the floor. Hold the stretch for one deep breath and return to the starting position.

Repeat 8 to 10 times, alternating sides.

Tips: only move as far as it feels comfortable

place a pillow between your knees for comfort

Back extension

Start position: Lie on your front and rest on your

forearms, with your elbows bent at your sides. Look towards the floor and keep your neck straight.

Action: Keeping your neck straight, arch your back up by pushing down on your hands. You should feel a gentle stretch in the stomach muscles. Breathe and hold for 5 to 10 seconds. Return to the starting position.

Repeat 8 to 10 times.

Tips: don't bend your neck backwards

keep your hips on the floor

Deep abdominal strengthening

Start position: Lie on your back. Place a small, flat cushion or book under your head. Bend your knees, keeping your feet straight and hip-width apart. Keep your upper body relaxed and your chin gently tucked in.

Action: As you breathe out, gently tense the muscles in your pelvis and lower tummy so they're pulled up towards your chest. Hold for 5 to 10 breaths and relax.

Repeat 5 times.

Tips: this is a slow, gentle exercise – don't try to tense your muscles too quickly or too hard

make sure you don't tense up through the neck, shoulders or legs

Pelvic tilts

Start position: Lie on your back. Place a small, flat cushion or book under your head. Bend your knees, keeping your feet straight and hip-width apart. Keep your upper body relaxed and your chin gently tucked in.

Action: Gently flatten your lower back into the floor and tense your stomach muscles. Now tilt your pelvis towards your heels until you feel a gentle arch in your lower back and return to the starting position.

Repeat 10 to 15 times, tilting your pelvis back and forth in a slow rocking motion.

Tips: don't press down through your neck, shoulders or feet

place one hand on your stomach and the other under your lower back – if you're doing the exercise correctly, you should feel the muscles working in these areas.

RESULTS

The patients who fully adhered to the therapy were 35 (70%)(subgroup YES) out of 50 (Tab.2).

The remaining 15 patients(subgroup NO) in 10 cases did not adhere to rehabilitation therapy while in 4 cases to drug therapy and in one case to both. The

Table 2. Description of the Two Populations

Description of the 2 populations	YES	NOT
Number of Patients	35	15
Average Age Of Patients(SD)	56.5(±15.8)	46.6(±14.3)
Age Range Of Patient	20-73	20-68
Gender Ratio (M:F)	0.25(15:20)	0.5(5:10)
Job Of Population (%)	Agricultural Activity: 12(24%) Industrial Sector: 10(20%) Tertiary Industry: 7(14%) Unemployed:4(8%) Students: 2(4%)	Agricultural Activity: 3(6%) Industrial Sector: 5(10%) Tertiary Industry: 3(6%) Unemployed:3(6%) Students: 1(2%)

lack of predisposition and time to physical activity was the motivation for not having joined the rehabilitative therapy. The cost of medical therapy, on the other hand, is the cause of not having taken part in the use of drugs. In the case of non-adherence to both therapies, it is due to the fact that the patient has referred to an osteopath. There was a statistically significant difference for patients participating in the therapy.

The average drug concentration averaged/was? 10.3 (±3.21; 3-15) tablets per month in the adhering subgroup (YES) versus 22.7 (±8.75; 15-30) in the non-adhering group (NO), p <0.05 for YES. Within 6 months, 10 patients of the YES group were re-evaluated with second level radiological diagnostic tests (3 CT, 4 3RMI, 3 patients both) while to all 15 patients(of the NO group?) second level examinations has been performed (4 CT, 8 MRI, 3 both), p <0.05 for YES.

We noticed that already after 1 month there was a statistically significant difference in the OBLPQS (Fig.1) and SF-12 (Fig.2) between the YES and NO group, p <0.05 for YES.

We found that at 6 months the regression between Clinical Outcomes and VAS scores showed a p value of 0.032 in YES while p= 0.068 in NO, p<0.05 for yes.

The Average Correlation clinical results and patients' outcomes was high according to Cohen κ: 0.84±0.075 for YES while κ: 0.82±0.10 for NOT, p>0.05.

We had no complications in either group.

DISCUSSION

Low back pain is a very common condition, about 90% of people/the population suffer from it at some point in

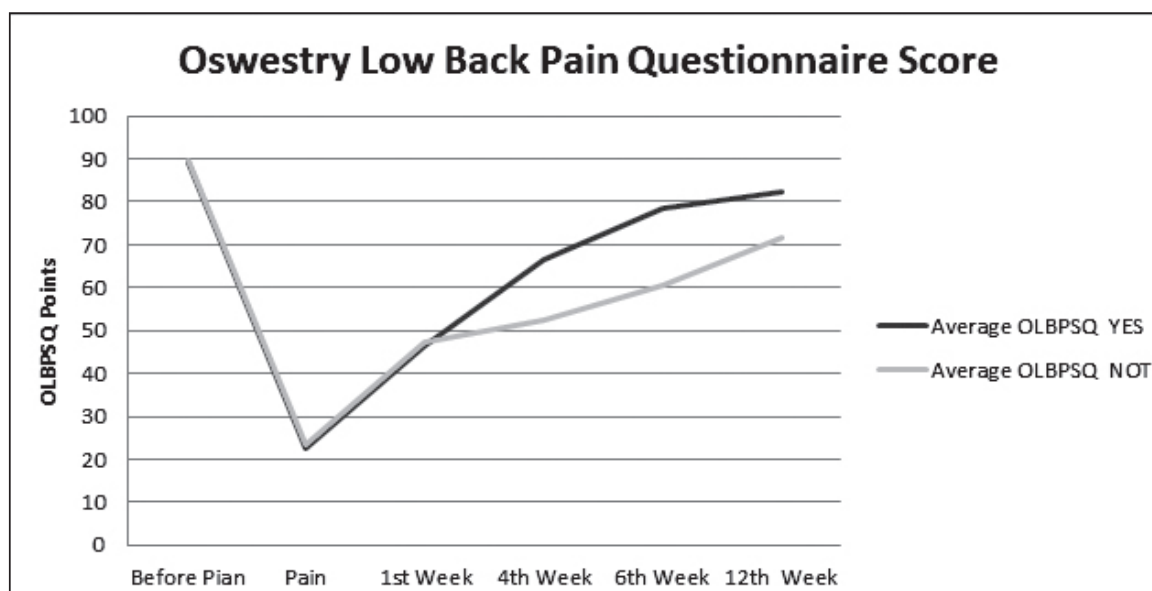


Fig. 1. The subjective and objective quality of life and the lumbar spine function measured by the Oswestry Low Back Pain Questionnaire Score. After 1 month there was $p < 0.05$ for YES.

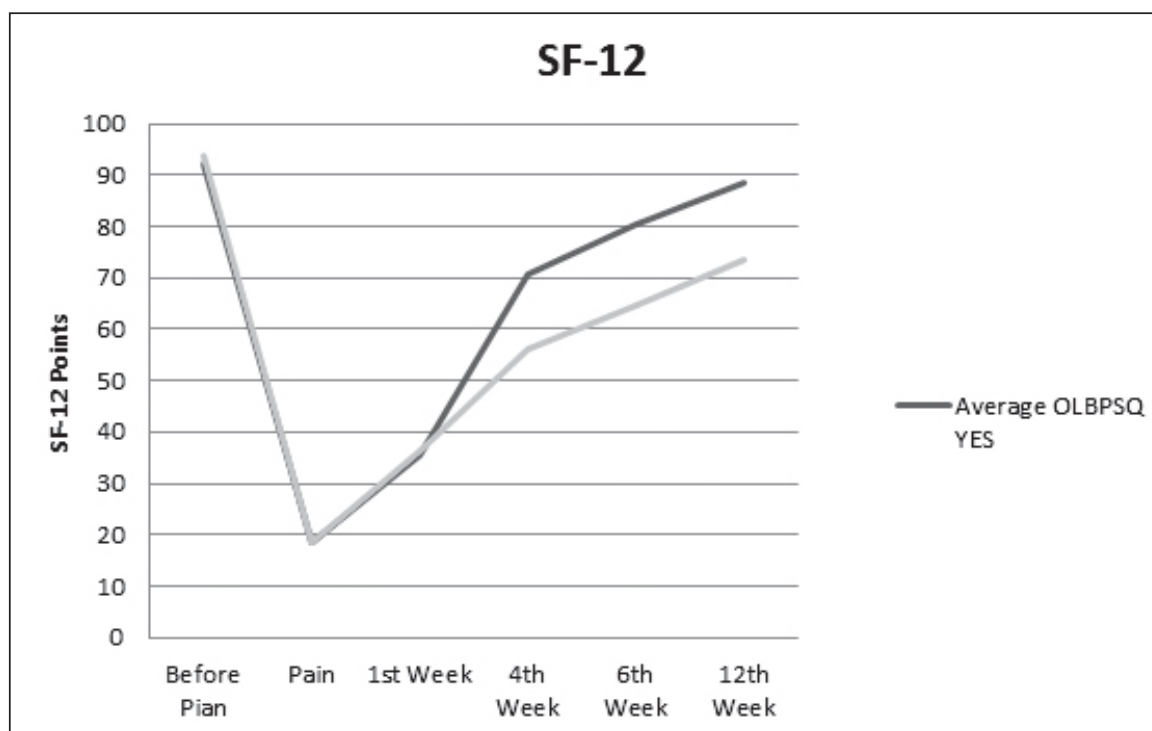


Fig. 2. The subjective and objective quality of life measured by The Short Form (12) Health Survey. After 1 month there was $p < 0.05$ for YES.

their lives[7]. It is a leading cause of lost time at work and disability. For example, in the USA, it is responsible for an annual direct health care expenditure of more than \$20 billion[8]. Back pain is classified into three categories based on the duration of the symptoms. Acute back pain is arbitrarily defined as pain that has been present for 6 weeks or less. Sub-acute back pain has 6 to 12 weeks duration and chronic back pain lasts longer than 12 weeks[9]. Using these three categories, we can make predictions about prognosis. At least 60 percent of patients with acute low back pain return

to work within one month, and 90 percent return within three months[10]. With minimal intervention, most patients improve in the first few weeks. LBP is usually self-limited, resolving in 4 to 8 weeks in more than 50% of patients, yet the recurrence rate is high, about 85%. The anatomical complexity of the bony, muscular ligamentous, and neural elements of the lack of specificity and the high rate of early, spontaneous remission. Exceptions to this include history of recent trauma, presence of red flags or chronic unremitting course. Many treatment modalities, including drug

therapy, physical therapy, ultrasound, thermal therapy, local injection and surgeries have been tried, but most studies give variable/heterogeneous results[11-15]. Kolt et al[16] have found that higher levels of adherence to clinic-based activities significantly predicted both the patients' and physiotherapists' perception of the degree of rehabilitation at the end of the 4-week rehabilitation period. These findings are discussed in relation to rehabilitation strategies for physiotherapists. Although no gender differences were found, compensable patients adhered significantly less to clinical-based rehabilitation activities than did their non-compensable counterparts. In their study about LBP's in the elderly, Mailloux et al[17] reported that the exercise behaviors of many elderly adults with chronic low back pain can increase after an exercise-oriented spine physical therapy program. We used an educational strategy to improve compliance in home-based exercises which proved to be effective and a clinically viable strategy. It is recommended that the exercise is prescribed with accompanying written and illustrated instructions to increase compliance in prospective clinically randomized trials on therapeutic exercise. Already in 1998 Schneiders et al [18] reported high rates of physiotherapy adherence to LBP. They reported a significantly higher mean compliance (77.4%) compared to the group who received verbal instruction alone (38.1%). T-test analysis indicated a significant difference between groups for compliance to the prescribed exercises ($P < 0.000$).

However, many patients for various reasons are not adhered to home physiotherapy[19]. In their study, the Etoricoxib Protocol 042 Study Group[20] reported that the etoricoxib at either dose(which ones?) led to

significant improvement in other endpoints, including RMDQ scores, bother someness scores and global assessments. Etoricoxib given once daily provided significant chronic LBP-associated symptoms and disability relief, that was observed 1 week after initiating the therapy, was maximal at 4 weeks, and was maintained over 3 months. Another study conducted by et al[21] reported at follow-up, 91% of patients were satisfied with the pain control provided by etoricoxib compared with 34% who were satisfied with the pain control provided by previous NSAIDs. Among physicians, 93% reported satisfaction with the analgesic effect, 95% with the anti-inflammatory profile, and 82% with the side-effect profile of etoricoxib relative to pre-study NSAID treatment. During etoricoxib therapy, use of concomitant medications was reduced as adescring of Vas Score. Also, in other districts such as the knee the literature reports the rupture/interruption? of the use of pain killer if used to/in concomitance with? physiotherapy [22]. One goal of evaluation is to minimize unnecessary imaging studies/analysis? that may generate potentially misleading information. The high incidence of radiographic abnormalities in asymptomatic persons/subjects? can lead to misdiagnosis. On X-rays/Radiographically, 79% of patients between 50 and 65 years of age have narrowing, sclerosis, or osteophytes, and on magnetic resonance imaging (MRI), 14% of patients aged younger than 40 years and 28% of patients aged older than 40 years have major abnormalities[23]. In the YES subgroup we reduced the (number of?)CT or MRI check-ups. From a recent study it was seen that adherence to physiotherapy and pharmacological therapy in LBP and leg irradiation, the subjective and objective scores as SF-12 and OLBPQS increase[24-28].

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