

Clinical Characteristics of Low Back Pain

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Abstract: *Low Back Pain (LBP) is a problem of civilizations, with epidemiological data clearly indicating the growth of the population affected by the condition. The aim of the study was to describe the clinical characteristics of low back pain in outpatients. This is a prospective study. A total of 274 patients with lumbago were followed up at University Hospital Centre in Tirana, Albania during the years 2010-2015. The records of patients whose chief complaint was first time LBP were reviewed in detail, including their medical histories, examinations, imaging, and consultations with other specialists. Demographic data, such as age and gender, were reviewed. According to anatomical location predominates pain in the lower back alone (44.2%) followed by lower back and spine (34.3%), lower back and hip (7.2%), lower back and SIJ (4.5%). Low back pain is one of the most common reasons that patients seek care from a primary care physician.*

Keywords: low back pain, clinical characteristics

1. Introduction

LBP is a problem of civilizations, with epidemiological data clearly indicating the growth of the population affected by the condition. Studies have estimated the one-year incidence of a first-ever episode of low back pain ranges between 6.3% and 15.4%, while estimates of the one-year incidence of any episode of low back pain range between 1.5% and 36% (1). Lower back pain of mechanical origin is caused by injuries and/or degenerative conditions of the vertebrae and intervertebral discs and by the faulty distribution of forces within the soft tissues. The most frequently diagnosed mechanical problems are disc herniation (including disc fractures and their dehydration), compression fatigue fractures, and acute traumatic injuries (2). In its chronic form, LBP affects over 20% of the global population; 24–80% of patients have a lapse of pain in the first year (3). Despite the fact that 31% of patients with LBP demonstrate an improvement within 6 months, the recurrence of moderate pain is reported in 33% of cases, and acute pain is observed in 15% of sufferers within 1-2 years (4). Recent studies indicate that people with LBP experience pain and the related disability longer than patients suffering from pain in the course of other diseases (4). Nonspecific back pain is increasingly affecting young people, and this can be an important determinant of LBP in adulthood (5). The necessity of systematization of therapeutic procedures results from the fact that back pain causes motor disability, thereby significantly reducing (and even temporarily disabling) motor activity with the consequent absence from work, particularly in the countries with a highly developed market economy (6). It has also been found that LBP, caused, for example, by discopathy, recurs after surgery (7). Once a patient experiences back pain he or she is more likely to experience it again. Estimates of recurrence at one year range from 24% to 80% (8). Many environmental and personal factors influence the onset and course of low back pain. Studies have found the incidence of low back pain is highest in the third decade, and overall prevalence increases with age until the 60–65 year age group and then gradually declines (9). An acute episode can lead to chronicity. Factors that influence chronicity include depression, employment status, chemical dependency and failure to treat acute

episodes as indicated. Chronic low back pain (pain lasting greater than 12 weeks) is a leading cause of disability and cost. The total costs of low back pain in the United States exceed \$100 billion per year. Two-thirds of these costs are indirect, due to lost wages and reduced productivity. Each year, less than 5% of the patients who have an episode of low back pain account for 75% of the total costs (10). Understanding how to identify and classify low back pain will help develop a treatment plan that can reduce chronicity, decrease costs, and improve health and function. Low back pain is classified as either non-specific low back pain or radicular low back pain. The aim of the study was to describe the clinical characteristics of low back pain in outpatients.

2. Materials and Methods

This is a prospective study. A total of 274 patients with lumbago were followed up at University Hospital Centre in Tirana, Albania during the years 2010-2015. The records of patients whose chief complaint was first time LBP were reviewed in detail, including their medical histories, examinations, imaging, and consultations with other specialists. Demographic data, such as age and gender, were reviewed. If the evidence for determining the source of LBP were strong enough during the review of the records, a diagnosis was established. However, if other sources of the LBP were suspected or if there were other red flags for given patients, other evaluative tools were considered; such as magnetic resonance imaging (MRI), plain anteroposterior and lateral radiographs of the lumbosacral spine (a total of two views), erythrocyte sedimentation rate (ESR), complete blood count, and C-reactive protein level. Spinal diseases have been evaluated mainly by history and physical examination findings in correlation with imaging. In these patients, well-controlled injection techniques directed at specific targets in and around the spine were performed for diagnostic and therapeutic purposes. Patients who had suspicious to discogenic back pain underwent discography. Hip pathology was considered when patients had pain in the groin area that started with walking and increased on passive hip range of motion. So, injections in the hip and computerized topography (CT) scans were performed.

Volume 10 Issue 8, August 2021

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Sacroiliac (SI) joint injection and CT scan of the pelvis were performed for patients who had pain in the region of the sacral sulcus and positive findings on maneuvers. For the cases in which improvement was reported after injections, the diagnosis of SI joint (SIJ) pathology was considered. Pain was evaluated with a visual analogue scale (VAS) with scores ranging from 0 to 10 (0 for no pain and 10 for intolerable pain), and a 50% decrease in the pain score was considered to be indicative of significant pain relief. For patients who had evidence of more than one source of pain, all procedures for doubtful sources were done in different visits with the spot of anesthetic agent time period and for whom no sources of the pain had been found, No cause found subscale was considered.

3. Results and Discussion

From the total of 274 patients 159 (58%) were males and 115 females. The mean age was 53.3±15.8 years with a range, 21 to 80 years. The characteristics and localization of pain is shown in table 1. The pain was acute in 68.5% of patients, subacute in 14.4% and chronic in 7.2% of them. The average duration of pain was <1 week in (70.3%), 1-4 week in 11.7% and >4 week in 8.1%. According to the severity the pain was mild in 12.6%, moderate in 20.7% and severe in 56.8%. According to anatomical location predominates pain in the lower back alone (44.2%) followed by lower back and spine (34.3%), lower back and hip (7.2%), lower back and SIJ (4.5%). Our findings showed that the spine is the most frequent source of LBP. The frequencies with which other sources were identified were in the following order: No cause found, spine with SIJ, spine with hip, SIJ, hip, spine along with hip and SIJ, hip with SIJ, and other diseases. The sources of LBP are significantly different in males than in females; and also, the mean ages at which the two genders encountered the onset of LBP were significantly different. Most of the 'no cause' findings occurred in patients who were 18 or younger. LBP is the second chief complaint (after the common cold) of patients who are referred to clinics. Therefore, having knowledge of the frequencies with which various sources cause LBP and also specifically the age ranges affected by specific sources can help physicians provide effective treatment. As our results showed, the spine is the most common cause of LBP. This finding confirmed the results of previous studies (11-13). Our findings showed that patients whose LBP has a spinal source are generally younger than the people whose LBP is caused by other sources. This result is in agreement with the results of previous studies (14, 15) We found that the prevalence of the spine as a source of LBP increased until the patients were 50-years-old, after which it decreased. This finding is in contrast with the results of other studies' (16) multivariable model analysis. They showed that the prevalence of the spine as the source of LBP decreases as age increases. The difference may be because of the difference in the sizes of the sample in the two studies and also sampling biases. We found that 4.5% of patients had solely an SIJ source. Our result is in contrast with the results of another study (17) which indicated that the rate at which SIJ was the source of LBP was approximately 18.5%. This difference may be because their study focused only on SIJ, but we have identified the reasons that SIJ was combined with other causes of LBP, such as the spine, hips, or both.

Therefore, it is understandable that the rate of LBP associated with only SIJ was less in our study than it was in their study. We found that the role of SIJ with respect to LBP increases as the ages of the subject increase, and this finding agrees with that in a previous report (18). The results of our study indicated that females are more likely to be affected by LBP than males. This result also was in agreement with the findings of previous studies (19-21) However, no difference between males and females was observed in some studies; and in fact, some studies found that men reported more LBP than women (22) This may be due to sampling bias, especially if the studies enrolled males who did physical labor at work (23, 24). We found that most of the undetermined sources occurred in patients who were 18 or younger. This finding may have been influenced by the fact that more psychiatric problems occur in young adult females. The role of psychological distress, including somatization (the expression of distress due to physical symptoms or their persistence) as a presumed source of LBP, has been shown in previous reports (25,26) and physicians should be aware of the potential role of psychological problems when they are dealing with patients who have LBP. Our results showed that the rate of involvement of the hip as a source of LBP increases as patients' ages increased. This may be attributable to the increased rate of osteoporosis and microfractures in hip joints as people age.

4. Conclusion

Low back pain is one of the most common reasons that patients seek care from a primary care physician. In most cases, it has a benign etiology. However, a thorough history should be obtained and physical examination performed in patients with low back pain, because they can elicit warning signs that indicate the need for further work-up. Serious causes of low back pain, such as malignancy and infection, should not be missed.

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Table 1: Clinical characteristics of pain among patients

Variables	N	%
Type of pain		
Acute	188	68.5
Subacute	40	14.4
Chronic	20	7.2
Average duration of LBP		
<1 week	193	70.3
1-4 week	32	11.7
>4 week	22	8.1
Severity		
Mild	35	12.6
Moderate	57	20.7
Severe	156	56.8
Anatomical location of pain		
Lower back	121	44.2
Lower back and spine	94	34.3
Lower back and hip	20	7.2
Lower back and SIJ	12	4.5