A Clinical Decision Making Pragmatic Approach for Lower Back Pain in the Clinical Context

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Abstract

Lower back pain (LBP) is a collective musculoskeletal illness affecting the overall population although the frequency of back pain and dysfunction take place with aging. Earlier research suggests that LBP prevalence progressively increases with aging and its occurrence may be recognized as an occupational exposure among working-age adults in pain perception. This leads to tremendous strain in every nation as it represents one of the leading causes globally of growing disability and major socioeconomic burden in almost every healthcare system. Thus, an efficient back pain management strategy is an urgent priority given the alarming socioeconomic burden of this musculoskeletal disorder for nearly all healthcare providers globally.

Keywords: lower back pain; clinical decision-making; pragmatic approach; evidence-based practice

Introduction

Low back pain (LBP) is the most common health problem and remains a global issue in every population. This common condition affecting many individuals at some point in their lives and incidences of LBP progressively increase with occupational exposure among working-age adults and age-related changes in community dwelling seniors [1]. The recent studies study estimated that approximately 97% of people experience back pain at any one time in their life while around 62% is mechanical nature or non-specific (NSLBP) but between 5% and 10% of cases develops chronic low back pain (CLBP) then it is likely to be the primary focus on seeking health care services [2]. In population-based studies, the 1-year prevalence of LBP ranged from 13 to 50% worldwide, up to 80% of back pain patients suffering in long-term and one-third of these cases are often inadequately treated [3]. The differential diagnosis is very important in acute cases (ALBP) because it has a wider-range of underlying pathological causes and it is an essential to have precise differential diagnosis to reach potential positive prognostic value and higher quality of patient care and safety. According to the Global Burden of Disease Study evaluation revealed that low back pain accountable for many years patient lived with disability, the back pain represents one of the leading causes globally for growing number of disability and major socioeconomic burden in almost every healthcare system. This musculoskeletal disorder potentially impacts on a person's quality of life, work absence and leads to long-term disability subsequently dependency of activity of livings and developing huge socio-economic burden in worldwide [4]. A number of study findings reveal that lower back pain has a wider-range of potential etiologies and the back pain symptomatology can be overlap each other also depend on the patient population but among the mechanical nature and non-specific causes are most common. However, successful outcomes of lower back pain are dependent on precise differential diagnosis. It can be reached by detailed clinical history taking, knowledge of the regional anatomy, precise understanding of the pathology comprehensive physical examination and diagnostic studies [5]. A number of clinical guidelines show that potential success of conservative management for lower back pain approximately 70% although in certain cases surgical intervention is required [6]. Thus, the efficient back pain diagnostic triage is an urgent priority as the alarming rate of socioeconomic burden of musculoskeletal disorders for nearly all healthcare service providers in every nation in worldwide. This paper aims to provide a lower back pain algorithm for clinicians, who have potential diagnostic responsibilities in making clinical-decision on lower back pain.

Clinical Presentation

The increasing chronic lower back pain disorder is a global challenge. This leads to tremendous strain on health care services as they need to address rising numbers of patients with conditions that largely cause disability. There are some type of pain can be understood straightforwardly because there is a clear structural damage such as a cut or a bruise of skin but some pain mechanism is less obvious like chronic lower back pain. The lower back pain is classified as acute when it persists for up to 6 weeks period and it is considered as sub-acute when it is prolonged for up to 3 months. If the pain is persisted beyond 3 months that commonly requires to natural healing time it is considered as chronic lower back pain and has a huge negative impact on the lives of number of people [7]. The acute lower back pain is often

occurred as the result of tissue injuries and patients suffer from acute back pain are less likely to seek medical care because acute pain gets better on their own or with appropriate treatment. However, the chronic pain is associated with health care cost and burden has been reported across health care systems globally. The back pain is usually described as localized pain, muscle tension and/or stiffness below the costal margin and above the inferior gluteal folds with or without leg symptoms (sciatica). The common symptoms of non-specific low back pain are pain and functional [8]. The diagnosis and treatment for patients with low back pain have variation within and between country's clinical practice guidelines.

Clinical diagnosis

The clinical history taking and comprehensive physical examination are the first and most important in the evaluation process of lower back pain to help narrow down the diagnosis. The goal of diagnosis in lower back pain is to describe the root causative factor of anatomic pain unambiguously as possible also focusing on carefully defined clinical subgroups with the

understanding [9]. However, this is not always likely classified. This is essential to careful structure of clinical questions, active listening to the answers and mapping out the location of the pain. The key area in the medical history taking helps to identify the present pain location and any changes since its onset [10]. Also it is needed to find out easing and aggravating of pain factors because these are important keys to arrive a precise differential diagnosis. For example, a back pain associated with herniated disc would be painful on sitting and better on standing or lying in comparison, a patient with lumbar canal stenosis would feel better on sitting while he suffers when he walks (neural claudication). Moreover, patients with facet joint degenerative changes and muscle sprains would be relieved when lying down [11]. At this point, it is essential to the treating clinician to clear understanding on the difference between radicular and referred pain. However, if pain does not fit any known diagnostic profile of a clinical picture, there may be other factors that interfere with diagnosis and recovery that need to be addressed.
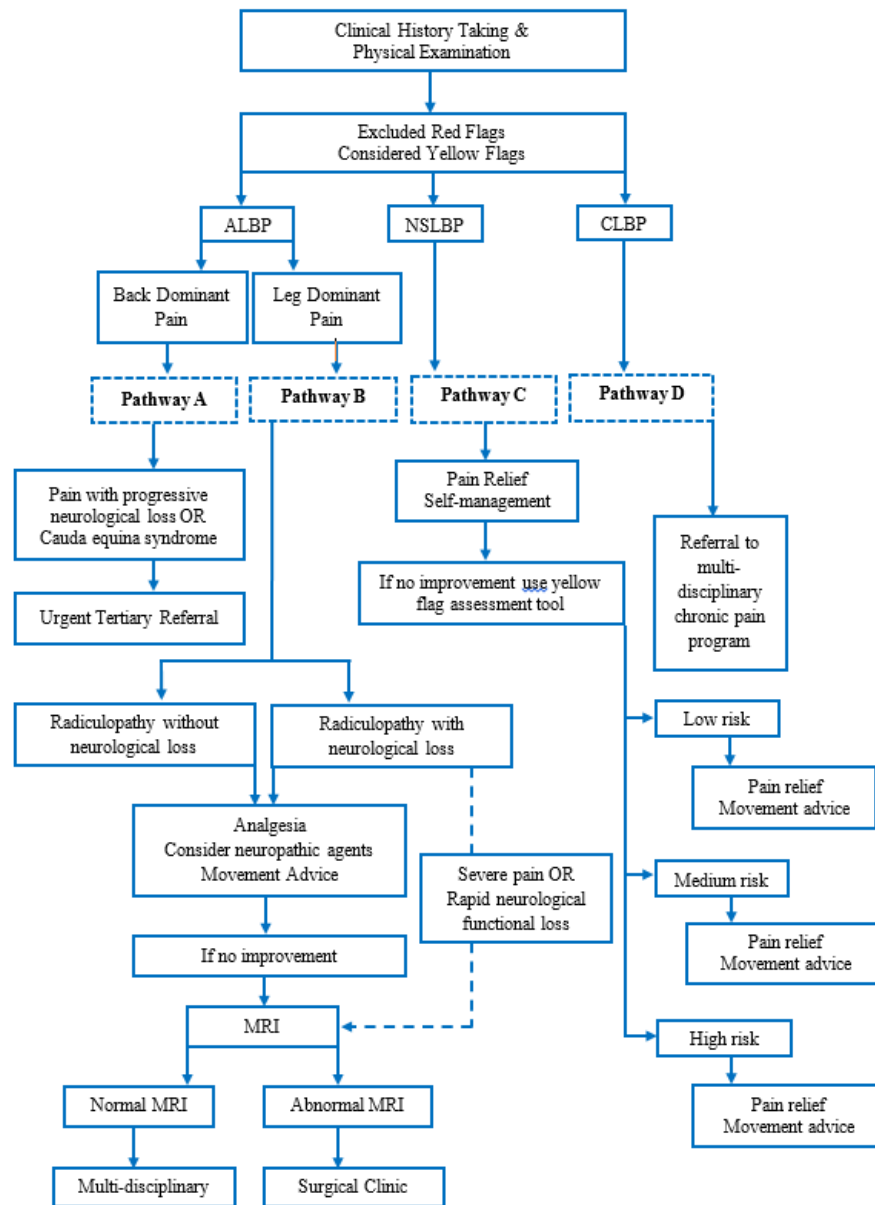
Figure 1: Lower Back Pain Clinical-Decision Making Algorithm [12]

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