

# A survey of patient's attitude toward low back surgery in a major center in Saudi Arabia

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## ABSTRACT

**Objective:** Similar to any other invasive procedure, low back surgery has potential complications. These potential complications lead many patients to refuse the surgery when it is indicated. The aim of this study was to evaluate patient's attitude toward low back surgery and identify factors that might influence their decision.

**Methods:** Seventy consecutive patients who attended the outpatient clinic of the King Fahad National Guard Hospital Riyadh, Kingdom of Saudi Arabia, between May 2002 and July 2002, due to chronic low back problems and who were surgical candidates were included in this study. The low back outcome score (LBOS) was used to assess these patients. The proposed surgical procedure was explained to each patient and the family and the potential complications were discussed. The patient's response to the proposed surgery was assessed. Mantel-Haenszel Chi-square test was used for statistical analysis.

**Results:** A total of 70 patients were included in this study. Thirty-eight were females and 32 were males. The average duration of symptoms was 3.3 years (range 0.5-20). Of the whole group of 70 patients, 31 (44%) agreed to surgery. The remaining 39 (56%) refused surgery for various reasons. There was no statistically significant difference in the demographic data or the LBOS between the 2 groups.

**Conclusion:** There is a relatively high refusal rate (56%) for low back surgery in the group studied. No specific influencing factor could be identified in this group. Pain and disability as measured by the LBOS does not seem to be a factor. Patient's education on the disease process and the contemplated surgery are crucial in helping them to make an informed and reasonable decision.

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Low back pain is a common problem. It is estimated that 8 out of 10 people will suffer from low back pain at some stage during their life. It is a major cause for disability and impairment in the adult age group.<sup>1</sup> Even though most episodes of low back pain are self-limiting, in some patients the pain becomes chronic and interferes with activities of daily living. There are 2 main types of back pain. Mechanical pain usually results from inflammation caused by irritation or injury to the part of the axial skeleton such as the disks, facet joints, ligaments, or muscles of the back. This type of pain is usually located in the lower part of the spine and may

involve the buttock and thighs areas. The other type of pain is the neurogenic type of pain, which occurs when the spinal nerve roots are irritated or pinched such as in herniated disks or spinal stenosis. Neurogenic pain usually extends below the knee to the foot and can be associated with numbness.<sup>2,3</sup> Treatment of low back problems usually starts with conservative measures such as physiotherapy, general conditioning, exercise, medications and other non-operative methods. Surgical treatment is only necessary in a small number of patients who fail conservative treatment. There is no one surgical procedure that is appropriate for all low back problems.

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Commonly used procedures include discectomy, decompression, fusion, instrumentation or a combination of them.<sup>4</sup> Careful patient selection is essential for successful low back surgery. The diagnosis should be clear and the particular pathology must be accurately identified. The patient must give a clear and consistent history and the clinical examination must correlate with the history. Investigations must confirm the diagnosis. Other detrimental factors such as psychosocial issues must be clearly identified and controlled before surgery is contemplated. Evidence suggests that presurgical psychosocial factors may be important modifiers of back pain reporting and back surgery outcome.<sup>5-8</sup> Patient expectations must be assessed and a realistic goal and expected outcome must be clear to both the patient and the treating surgeon. Similar to any other invasive procedure, low back surgery has potential complications.<sup>9</sup> General complications include the risk of anesthesia, bleeding, and infection. Specific complications depend on the particular procedure and may include neurological injury, dural laceration, iatrogenic instability, and hardware related problems. In some degenerative conditions, the surgery is aimed at reducing rather than eliminating the symptoms. In other instances, the disease process might evolve later on to affect levels other than the operated one, thus accounting for recurrence of the low back pain. Paralysis is probably the most feared complication after low back surgery. When compound with misunderstanding or misinformation, these potential complications lead many patients to become reluctant to undergo low back surgery, thus depriving themselves from a chance for major improvement in their symptoms when surgical treatment is known to give better results.<sup>10</sup> The aim of this study was to evaluate patient's attitude toward having low back surgery and identify factors that might influence their decision.

**Methods.** From the practice of a single consultant orthopedic surgeon with interest in spinal surgery and low back problems (Behairy), a total of 210 patients with chronic low back problems attended the outpatient clinic of the King Fahad National Guard Hospital, Riyadh, Kingdom of Saudi Arabia, between May 2002 and July 2002. Seventy (33%) of these patients were surgical candidates are included in this study. To be a surgical candidate, the patient must have a clear and consistent symptoms. The clinical examination must correlate with the symptoms, and radiological investigations must confirm the pathology. Furthermore, the patient must have had an adequate trial of nonsurgical treatment including the appropriate use of physiotherapy modalities, painkillers, and nonsteroidal anti-inflammatory medications for a minimum of 6 weeks. They must have a stable mental and psychosocial environment based on the absence of any mental or psychological problems in their past or present history. They must also be fit for general anesthesia. Each patient underwent a structured interview by the treating surgeon

(Behairy). The low back outcome score (LBOS) was used to assess these patients.<sup>11</sup> The LBOS features measures of functional disability and "passive" activities such as analgesic use. Analgesic use provides a measure of patient's response to pain as recorded on the visual analog scale, and also gives a measure of how the severity of the pain is perceived by the patient in terms of need for treatment.<sup>12</sup> In addition to the visual analog scale, the score assesses working status, ability to undertake household chores, sports or active pursuits, need for rest, frequency of medical consultation due to LBP, and other activities such as sex life, sleeping, walking, traveling, and dressing. Overall scores can vary from 0 (very disabled) to 75 (not at all disabled). Patients are placed in one of 4 outcome categories depending on their overall scores: 65 (excellent), 50 (good), 30 (fair), and <30 (poor). The LBOS emphasizes objective questions and has been shown to have a good internal consistency and test-retest reliability for use in clinical practice.<sup>13</sup> It was developed as a quick, practical paper and pencil method of measuring outcome in patients with lumbar spine disorders. The proposed surgical procedure is explained to each patient and the family in layman terms and the potential complications are discussed. The patient's response to the proposed surgery was assessed. For those who refuse surgery, the patients were asked to express the reason for refusal from their own words. Patients who refused surgery were contacted 3 months later to find out if they had surgery somewhere else.

**Results.** A total of 70 patients were included in this study. Thirty-eight were females and 32 were males. Their average age was 47 years (range 12-70). Their average weight was 74 kilograms (range 50-100), and average height was 167 centimeters (range 140-180). There were 27 housewives, 12 soldiers, 10 teachers, 8 retired, 5 employees, 4 workers, 2 students, and 2 unemployed. All 70 patients (100%) had help available at home. The main diagnosis included spinal stenosis in 35 (50%) patients, herniated disk in 16 (23%), spondylolisthesis in 14 (20%), and degenerative spondylosis in 5 (7%). The average duration of symptoms was 3.3 years (range 0.5-20). Co-morbid conditions existed in 24 (34%) patients. These included hypertension in 18, diabetes in 15, and asthma in one patient. Four patients had previous surgery for their low back pain, 3 discectomies and one laminectomy. All 70 patients had a trial of conservative treatment for a minimum of 6 weeks. The type of surgery offered was discectomy in 16 patients, laminectomy in 27, instrumented fusion in 4, and decompression plus instrumented fusion in 33 patients. Of the whole group of 70 patients, 31 (44%) agreed to surgery. The remaining 39 (56%) patients refused surgery for various reasons. Those included fear of failed surgery in 22 (31%) patients, the thought that low back surgery is too dangerous in 14 (20%), fear of paralysis in 12 (17%), symptoms not bad enough in 10 (14%), and the thought

Table 1 - Demographic values.

Characteristics	All patients N=70	Agreeing N=31	Refusing N=39
Average age (years)	47	46	50
Male to female ratio	32:38	18:3	15:24
Average height (cm)	167	160	166
Average weight (kg)	74	74	73
Prevalence co-morbidity (%)	24 (34)	9 (29)	15 (38)
Average duration of symptoms (years)	3.26	2.7	3.6

Table 2 - Average values for the low back outcome score.

Average patient attribute	All patients N=70	Agreeing N=31	Refusing N=39
Pain score (0-9)	3	2.7	3.1
Work status score (0-9)	3.5	3.2	3.7
Household chores score (0-9)	3.7	3.8	3.7
Active pursuit score (0-9)	3.6	3.3	4.1
Need for rest score (0-6)	2.8	2.6	2.9
Frequency of medical consultations score (0-6)	2.2	1.9	2.4
Need for painkillers score (0-6)	2.3	1.9	2.7
Sex life score (0-6)	2.9	2.5	3.2
Sleeping score (0-3)	2.5	2.6	2.4
Walking score (0-3)	1.4	1.4	1.5
Traveling score (0-3)	2	1.9	2.1
Dressing score (0-3)	2.7	2.8	2.6
<b>Total low back outcome score (0-75)</b>	<b>33</b>	<b>31</b>	<b>35</b>

that they were too old for surgery in 6 (9%). Eighteen patients gave more than one reason for refusing the surgery. None of the 4 patients who refused due to the fear of failed surgery had low back surgery before. The patients who refused surgery tended to have a slightly higher value on the LBOS, there was no significant difference in the demographic data or the LBOS between the 2 groups (Tables 1 & 2). Eighteen of the patients who agreed to have surgery had a fair LBOS and 13 had a poor score. For the refusing patients, 4 had a good score, 22 had a fair score and 13 had a poor score. The group of patients who refused surgery was contacted 3 months after the initial interview and none of them has had surgery or changed their mind on the surgery. Mantel-Haenszel Chi-square test result was not statistically significant ( $p=0.9983$ ), thus indicating that LBOS was not correlated with agreement for surgery.

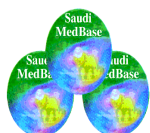
**DISCUSSION.** Low back pain and the resultant disability can be acute in some conditions such as acute disk prolapse, Cauda Equina syndrome, some tumors and infections. In the majority of patients, however, especially those with degenerative problems, the onset and progression of symptoms is slow and may take years to evolve.<sup>14</sup> The life style of most middle-aged Saudi people is a sedentary life style. Sports and active pursuits are not popular in this age group. In addition to that, social and economic factors led to the availability of immediate help at home in the form of family members or hired domestic helper. These factors, when combined with the slow and chronic nature of most low back afflictions, lead many patients to accept their symptoms and physical limitation as part of the natural aging process. Lack of knowledge and misunderstanding of the disease and the treatment options as well as misinformation on spinal surgery and the possible complications may lead patients to become reluctant to undergo surgical treatment for their conditions when they need it. With careful patient selection, low back surgery has been shown to diminish pain and decrease disability more efficiently than commonly used nonsurgical treatment.<sup>4,8,15-19</sup> Modern spinal surgery is safe, effective and carries a risk rate comparable to other surgical disciplines. Valen and Rolfsen<sup>20</sup> followed 350 patients who underwent low back surgery for 2-16 years, they found that the complications rate was 9.7%, most complications were not serious, and there was no mortality related to the surgery. While it is quite possible that other factors such as the specific institute and the specific surgeon might influence the patient's decision to undergo low back surgery, our study still showed a high refusal rate (56%) for low back surgery among local patients. No specific influencing factor could be identified in our study group. Pain and disability as measured by the LBOS does not seem to be a factor. Patient's educations on the disease process and the contemplated surgery are crucial in helping them to make an informed and reasonable decision.

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#### Abstract

Despite the advances over the 20-30 years in imaging technologies and the advent of various techniques for the assessment and rehabilitation of low back pain (LBP), it remains that more than 85% of all individuals presenting with this symptom are labeled with non-specific low back pain (NSLBP). Once the diagnoses of radiculopathy, infection, tumor and spondyloarthropathies are ruled out and the patient is said to have NSLBP, one can no longer equate radiological abnormalities to the underlying pathophysiologic pain generator. Although most clinicians are now well equipped to recognize the 'red flags' of acute LBP, we continue to serve poorly the patients labeled with acute, sub-acute and chronic NSLBP. This article will present a new concept in the assessment and treatment of patients with low back pain.