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Prognostic Factors for Persistent Leg-Pain in Patients Hospitalized With Acute Sciatica

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Study Design. Prospective cohort study.

Objective. To identify potential prognostic factors for persistent leg-pain at 12 months among patients hospitalized with acute severe sciatica.

Summary of Background Data. The long-term outcome for patients admitted to hospital with sciatica is generally unfavorable. Results concerning prognostic factors for persistent sciatica are limited and conflicting.

Methods. A total of 210 patients acutely admitted to hospital for either surgical or nonsurgical treatment of sciatica were consecutively recruited and received a thorough clinical and radiographic examination in addition to responding to a comprehensive questionnaire. Follow-up assessments were done at 6 weeks, 6 months, and 12 months. Potential prognostic factors were measured at baseline and at 6 weeks. The impact of these factors on leg-pain was analyzed by multiple linear regression modeling.

Results. A total of 151 patients completed the entire study, 93 receiving nonrandomized surgical treatment. The final multivariate models showed that the following factors were significantly associated with leg-pain at 12 months: high psychosocial risk according to the Örebro Musculosceletal Pain Questionnaire (unstandardized beta coefficient 1.55, 95% confidence interval [CI] 0.72–2.38, $P<0.001$), not receiving surgical treatment (1.11, 95% CI 0.29–1.93, $P=0.01$), not actively employed upon admission (1.47, 95% CI 0.63–2.31, $P<0.01$), and self-reported leg-pain recorded 6 weeks posthospital admission (0.49, 95% CI 0.34–0.63, $P<0.001$). Interaction analysis showed that the Örebro Musculosceletal Pain Questionnaire had significant prognostic value only on the nonsurgically treated patients (3.26, 95% CI 1.89–4.63, $P<0.001$).

Conclusion. The results suggest that a psychosocial screening tool and the implementation of a 6-week postadmission follow-up has prognostic value in the hospital management of severe sciatica.

Key words: cohort study, leg-pain, low back pain, multivariate analysis, prognostic factors, sciatica, secondary care, surgical treatment.

Level of Evidence: 2

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The treatment of lumbar spinal disorders constitutes a large portion of hospital costs, and the economic impact continues long after the patients are discharged due to work absenteeism.[1] The long-term outcome for patients acutely admitted to hospital with severe sciatica is generally unfavorable. Recent studies on this subgroup of patients are limited, but less than 1/3 of these patients were shown to experience a full recovery within 12 months regardless of whether they received surgical or nonsurgical treatment.[2,3]

Patients suffering from sciatica are commonly referred to hospital mainly because of progressive muscular weakness, bladder dysfunction, or intractable sciatic pain that is not manageable in an outpatient setting.[4] A Swiss study addressing this subject lists psychological and social problems as additional factors that characterize hospitalized patients suffering from sciatica.[5] Factors such as pain coping, fear avoidance beliefs, distress, depression, and work-related problems are well-known prognostic factors for persistent nonspecific back pain,[6–9] but they have not been thoroughly examined as potential prognostic factors for persistent sciatica in a hospital care setting.[10,11] Sociodemographic characteristics and results from physical examinations have been studied as potential prognostic factors for the outcome

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of sciatica, but according to two systematic reviews there are no strong or consistent significant associations. Further studies exploring the influence of biopsychosocial patient characteristics on the outcome of sciatica are therefore warranted.[10,11] The primary aim of this study was to identify neurological signs and psychosocial characteristics as potential prognostic factors for persistent leg-pain in patients acutely hospitalized with severe sciatica. Leg-pain as the primary outcome in this study was measured on a Numeric Rating Scale (NRS) as it is shown to be a responsive outcome in patients suffering from sciatica.[12,13]

MATERIALS AND METHODS

Design

This was a prospective cohort study with three follow-up assessments: a clinical reexamination and questionnaire at 6 weeks, a telephone interview at 6 months, and a postal questionnaire at 12 months (Figure 1). If the 12-month postal questionnaire was not returned within 2 weeks, patients were contacted by both email and phone.

Patients

Patients who had an acute admission to the Department Neurology at Oslo University Hospital in Norway during the period March 2012 to March 2014 were consecutively recruited into the study. Eligible patients were all registered inhabitants in Oslo and under the auspices of the Department Neurology at the Oslo University Hospital. This department services all patients requiring acute surgical or nonsurgical treatment of sciatica. All physicians responsible for hospital admission were working independently of the study program. No patients were hospitalized for the purpose of inclusion in the study. All patients were offered at least one physiotherapy consultation while hospitalized. This consultation was individualized based on patient clinical presentation, focusing on mobilization, pain management, posture, and exercises. Medicinal pain management was individually tailored, but most patients were treated with a combination of paracetamol, nonsteroidal anti-inflammatory drugs, and mild or strong opioids in accordance with World Health Organization's pain management guidelines.[14]

A selection of patients were offered lumbar microdiscectomy by the ward physicians. Patients with Cauda equina syndrome, severe pain refractory to analgesics, or a severe motor deficit were typically offered surgery. No other treatment forms were offered.

Inclusion criteria: age 18 to 65; suffering from sciatica, defined as radiating leg-pain with dermatomal distribution[3,4]; hospitalized with acute sciatica as their major complaint; and radiological confirmation of disc herniation on magnetic resonance imaging.

Exclusion criteria: Pregnant or breastfeeding; not literate in Norwegian; tumor, local infection, inflammatory demyelinating disease, or fracture detected by magnetic resonance imaging.

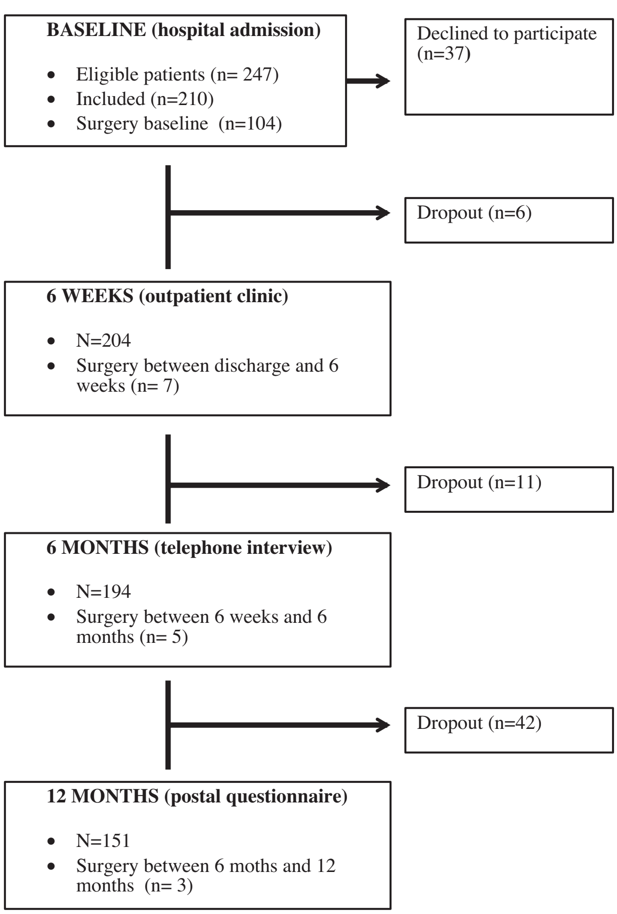

Figure 1. Flow diagram of the study population.

Potential Prognostic Factors

The sociodemographic factors included age, sex, current smoking status (yes/no), civil status, and level of education ($\leq$12 yr or >12 yr). Patients' working status was dichotomized into actively employed upon admission (yes/no). "Actively employed" was defined as paid work fulltime, part-time or partial sick leave.

Clinical factors were duration of leg-pain (<3 mo and <12 mo), leg-pain intensity on a 0 to 10 NRS (0 = no pain, 10 = worst leg-pain imaginable), daily use of any type of analgesic (yes/no), previous lower back surgery (yes/no), and body mass index.

The Örebro Musculosceletal Pain Questionnaire (ÖMSPQ) was used when assessing psychosocial status. This contains 25 items covering days off work, anxiety, tension, depression, pain, activities of daily living, ability to cope, job satisfaction, fear avoidance beliefs, and recovery expectations. The individual scores from the ÖMSPQ range from 0 to 210 points, and a score of more than 105 was proposed as a cutoff value for those at a high-risk of persistent pain. This validated and sensitive cutoff value (high-risk ÖMSPQ, score >105) was used as a potential prognostic factor in this article because the identification of high-risk patients would be easy to administer in the future.[15,16]

Physical functioning was assessed using the Oswestry Disability Index 2.0 (ODI).[17] It consists of 10 items (pain intensity, personal hygiene, lifting, walking, sitting, standing, sleeping, sexual activity, social activity, and traveling) rated on a scale from 0 to 5 (0 = no limitation, 5 = maximal limitation). The ODI scores were calculated to a 0% to 100% disability score.

Muscle power was assessed at the hip, knee, and ankle joints bilaterally using the Medical Research Council grading system.[18] If Medical Research Council more than 5, the patient was said to have a power deficit. Sensation was tested in all lumbar and sacral dermatomes, and any sensory loss was scored in the same manner as muscle power testing. Similarly, any ankle and patellar reflex deficit was categorized as a positive test. The straight leg examination was deemed positive if a leg-raise of less than 60° increased leg-pain. The four tests were assigned equal value when added together, resulting in a potential minimum score of 0 and maximum score of 4.

Outcome Measure

Leg-pain was measured at 12 months on a self-reported 0 to 10 NRS.

Statistical Analyses and Missing Data

All data analyses were performed using SPSS 22.00 (SPSS Inc, Chicago IL.) Significance level was set to $P \leq 0.05$ (two-sided), and all model assumptions were checked and fulfilled unless otherwise stated in the text. When conducting statistical analysis, missing data were assumed missing at random. Missing values were only imputed when single questions in the ÖMSPQ and ODI were not answered. This was only done for participants who answered at least 80% of the questionnaire, imputing the mean score of the responses to the specific question. Otherwise the data were defined as missing and subsequently list-wise omitted from analysis.

Chi-square test and independent *t* tests were used to explore potential differences between patients responding and nonresponders to the 12-month follow-up questionnaire.

The univariate analysis was done using simple linear regression. Variables from the univariate analysis with a $P < 0.1$ (lax criterion) were included in the multivariate analysis. The following variables were added to the final multiple regression models regardless of their univariate significance: age, sex, baseline leg-pain, and treatment received (conservative/surgery). In a backward approach, the nonsignificant variable with the highest *P* value were stepwise removed until all variables (except age, sex, baseline pain, and treatment) in the multiple regression model had $P < 0.05$. A variance inflation factor of less than 2 and tolerance more than 0.20 were used as outer boundaries when testing for multicollinearity and a Durbin Watson score between 1.5 and 2.5 when testing for serial correlation.

Changes in leg-pain were measured throughout the follow-up period and interaction effects from the multiple regression models were analyzed using repeated measures analysis of variance (ANOVA) and results were later controlled with mixed model (generalized linear). Homogeneity of variances was tested with Levine's test of variances and Mauchly's test of sphericity. A Greenhouse-Geisser correction of $P \leq 0.001$ was applied when assumption of sphericity was not met.

RESULTS

Of the 210 patients included in the study, 151 patients responded to the follow-up questionnaire at 12 months (Figure 1). Patients who did not complete the study (28%) differed only from patients completing the study by having a higher proportion of smokers (37% *vs.* 15%) and patients with less than 12 years of education (48% *vs.* 33%) ($P < 0.05$).

Table 1 shows the patient characteristics at baseline and the 6-week assessment for patients completing the study and for the nonresponders. The mean age was 43 years with no significant difference in sex. Most patients (66%) were actively employed upon inclusion, 25% were on total sick leave. More than half of the patients (58%) had high scores on the ÖMSPQ at baseline, whereas only 18% at the 6-week assessment.

Mean leg-pain in all the patients was significantly reduced from 7.3 (95% confidence interval [CI] 6.9–7.8) at baseline to 2.7 (95% CI 2.1–3.1) at 6 weeks (repeated measures ANOVA (baseline to 12 mo) $F(2.6, 337) = 194.2$, $P < 0.001$). No significant change in mean leg-pain was observed between 6 weeks, 6 months 2.03 (1.6S2.4), and 12 months 2.5 (1.9-2.8).

A total of 93 patients (62%) received surgical treatment during the study, 87% operated at baseline. The surgically treated patients had a significantly higher mean leg-pain score when admitted to hospital when compared with the nonsurgically treated patients, 7.9 (95% CI 7.5–8.3) *versus* 6.3 (95% CI 5.6–7.1) ($P < 0.01$). The reduction in mean leg-pain from baseline to 6 weeks was also significantly higher for the surgically treated patients when compared with the nonsurgically treated patients ($F(1, 136) = 30.5$, $P < 0.001$) (Figure 2).

Univariate Analysis

The following factors were significantly associated with leg-pain at 12 months when performing simple linear regression analyses (Table 2): low level of education, not actively employed, long duration of leg-pain before hospital admission, high ODI scores (baseline and 6 wk), high-risk ÖMSPQ (baseline and 6 wk), previous lumbar surgery, sensory loss (6 wk), positive leg-raise test (6 wk), more than two positive neurological tests (6 wk), and leg-pain measured at the 6-week assessment.

Multivariate Analyses

The following baseline factors remained significantly associated with leg-pain at 12 months in the multiple regression

TABLE 1. Patient Characteristics at the Baseline and 6-Week Assessment for Both Patients Who Responded and Did Not Respond to the 12-Month Follow-Up

Potential Prognostic Factors	Responders N	Responders % or SD	Missing	Nonresponders N	Nonresponders % or SD	*P* Difference
Baseline						
No. of patients	151	72		59	28	
Age, yr, mean (SD)	43.5	11.3		40.8	10.6	0.579
Males	85	56		29	49	0.351
Current smoker	22	15	1	18	37	0.005
Education >12 yr	100	67	1	30	52	0.046
Living without spouse/partner	94	63	1	26	44	0.369
BMI, mean (SD)	25.8	3.8		25.9	4.5	0.087
Actively employed	100	66	5	39	66	0.986
Duration of leg-pain						
<3 mo	108	73	3	36	66	0.294
<1 yr	136	92	3	49	89	0.533
Use of analgesics for leg-pain	128	85		54	93	0.129
Daily use of analgesics	83	56		39	67	0.130
Score ODI, mean (SD)	54	23.7		55.7	20.7	0.110
High-risk ÖMSPQ (score >105)	85	58	5	34	68	0.222
Clinical examination						
Sensory loss	119	79		40	70	0.163
Power deficit	96	64		34	59	0.508
Reflex deficit	86	60		37	67	0.327
Positive leg-raise	97	69		40	74	0.512
1 or more clinical tests positive	144	95		55	95	0.871
2 or more clinical tests positive	129	85		45	78	0.174
3 or more clinical tests positive	98	65		34	59	0.399
4 clinical tests positive	27	18		17	29	0.070
Leg-pain (NRS 0–10), mean (SD)	7.3	2.4		7.8	2.3	0.124
6-wk assessment						
Actively employed	92	61				
Score ODI, mean (SD)	24	18				
High-risk ÖMSPQ (score >105)	31	25				
Clinical examination						
Sensory loss	71	52				
Power deficit	76	56				
Reflex deficit	57	46				
Positive leg-raise	31	23				
1 or more clinical tests positive	23	17				
2 or more clinical tests positive	76	56				
3 or more clinical tests positive	41	30				
4 clinical tests positive	5	3.7				
Leg-pain (NRS 0–10), mean (SD)	2.7	2.7				

BMI indicates body mass index; NRS, Numeric Rating Scale; ODI, Oswestry Disability Index; ÖMSPQ, Örebro Musculosceletal Pain Questionnaire; SD, standard deviation.

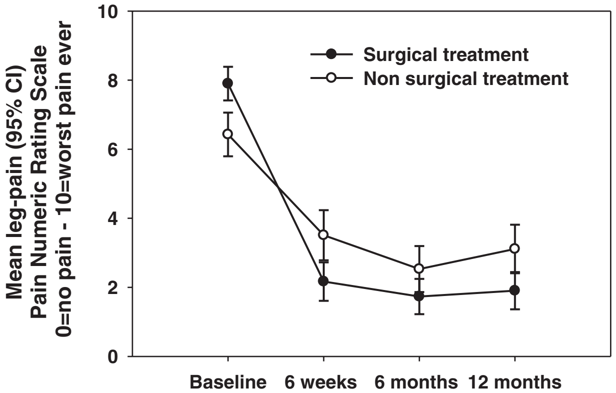

Figure 2. Leg-pain stratified by surgical and nonsurgical treatment. Mean (95% CI) leg-pain intensity recorded at hospital admission, 6 weeks, 6 months, and 12 months.

analyses: high-risk ÖMSPQ, not actively employed upon admission and not receiving surgical treatment (Table 3). A significant statistical interaction was found between treatment and the ÖMPSQ in the baseline model. Therefore, two additional multiple regression models stratified by treatment (nonsurgery/surgery) is shown in Table 3. These models show that high-risk ÖMSPQ was strongly associated with leg-pain at 12 months only among the nonsurgically treated patients ($P < 0.001$). No such association was found in the surgically treated patients. The same proportion of high-risk ÖMSPQ subjects was found among the nonsurgically and surgically treated patients (57% and 56%). Figure 3 illustrates this interaction effect, showing that high-risk ÖMSPQ patients receiving surgical treatment reported a significantly lower mean leg-pain score at 12 months when compared with nonsurgically treated high-risk ÖMSPQ patients, mean leg-pain 2.3 (95% CI 1.6–2.9) *versus* 4.7 (95% CI 3.9–5.5) ($P < 0.001$).

The final multiple regression model using potential prognostic factors from the 6-week assessment is shown in Table 4. Self-reported leg-pain assessed at 6 weeks was the only factor that remained significantly associated with persistent leg-pain measured at 12 months. Adjusting for age, sex, and baseline leg-pain had minimal effect on all the multiple regression models.

DISCUSSION

This prospective cohort study on patients admitted to hospital due to acute sciatica revealed four significant prognostic factors for persistent leg-pain at 12 months: high psychosocial risk according to the ÖMSPQ screening tool, not actively employed upon admission, not receiving lumbar surgery within a follow-up period of 1 year, and self-reported leg-pain recorded at 6 weeks posthospital admission.

Though the purpose of the study was to explore prognostic factors and not treatment outcomes, one limitation was that surgical treatment selection was not randomized. This precluded us from comparing the outcomes of nonsurgically and surgically treated patients. The current models are, however, of prognostic value, if specific case decisions concerning the pros and cons of surgery over nonsurgical treatment remain outside and independent of our prognostic models. Individual hospitals may also have different criteria for admitting patients with sciatica, as well as different criteria concerning surgical treatment.

A strength of this study is that selection bias was held to a minimum due to the lack of alternative hospital services available for eligible patients. Although extensive measures were put in place to curb the loss to follow-up, the sizable 28% dropout rate was similar to what other prospective studies on sciatica have reported.[2,19] Among our nonresponders, there were more smokers and lower levels of education. In the current literature, education levels are shown to have little influence on prognosis; however, smoking as a predictor for nonsuccess in sciatica is disputable.[10,11,20] Our results showed no association between the two, but assuming that smoking is a weak prognostic factor, the high proportion of smokers who did not respond to follow-up could bias the result in favor of a falsely low overall leg-pain score at 12 months.

Another strength of the present study is the use of leg-pain measured on an NRS as the main outcome. Although it does not give a direct measure of patient function or quality of life, it is found to be one of the most responsive of outcomes capturing disabling symptoms for patients suffering from sciatica.[12,13] Furthermore, preserving the pain-scale as a continuous variable prevented losing valuable information and making type II errors that can be found when data collected as a continua are split into possibly unjustified, oversimplified, or clinically irrelevant categories.[21]

Previous systematic reviews had difficulty drawing firm conclusions concerning the association between different psychosocial factors and clinical characteristics as prognostic factors for persistent sciatic pain.[10,11] In concurrence with our results, neurological deficits, duration of symptoms, age, sex, body mass index, smoking, and marital status have not shown to be strong prognostic factors for long-term outcome among conservatively treated patients.[10,11] Contrary to our findings, employment status in previous studies has not been considered a prognostic factor for persistent sciatic pain.[10,11,22] Employment status was the weakest prognostic factor in our baseline model, and unexpectedly we found it to be poorly correlated with baseline leg-pain and psychosocial status.

Psychological factors have shown to play an important role in the transition from acute to chronic nonspecific lower back pain.[23] Our result indicates that this also applies for hospitalized patients suffering from severe sciatica. High-risk ÖMSPQ patients were associated with higher leg-pain scores than patients in the low-risk group. Nonsurgically treated high-risk ÖMSPQ patients were found to have an especially high level of self-reported leg-pain at 12 months. The observational design of this study precludes us from drawing causal inferences concerning treatment effects and/or directing surgical treatment based on our prognostic

TABLE 2. Univariate Analyses of Potential Prognostic Factors Measured at Baseline and 6 Weeks, and Their Impact on Leg-Pain at 12 Months

Potential Prognostic Factors	B	95% CI	*P*
Baseline			
Age	0.01	−0.03 to 0.05	0.51
Males	−0.05	−0.90 to 0.80	0.91
Current smoker	0.95	−0.22 to 2.13	0.11
Education <12 yr	1.31	0.44–2.18	0.004
Living without spouse/partner	−0.31	−1.20 to 0.57	0.48
BMI	0.02	−0.01 to 0.13	0.77
Not actively employed	1.38	0.51–2.25	0.002
Duration of leg-pain prior to admission			
<3 mo	−0.86	−1.80 to 0.07	0.07
<1 yr	−0.99	−2.52 to 0.52	0.20
Use of analgesics for leg-pain	0.27	−0.94 to 1.48	0.66
Daily use of analgesics	−0.35	−1.21 to 0.51	0.42
Score ODI	0.02	0.00–0.04	0.03
High-risk ÖMSPQ (score >105)	1.69	0.86–2.51	<0.000
Clinical examination			
Sensory loss	0.93	−0.11 to 1.97	0.08
Power deficit	−0.96	−1.83 to −0.09	0.03
Reflex deficit	0.32	−0.57 to 1.20	0.48
Positive leg-raise	−0.02	−0.98 to 0.94	0.97
1 or more clinical tests positive	0.07	−1.95 to 2.09	0.94
2 or more clinical tests positive	−0.48	−1.69 to 0.72	0.43
3 or more clinical tests positive	−0.05	−0.94 to 0.84	0.91
NRS leg-pain (1–10)	0.02	0.80–0.20	0.80
Previous lumbar surgery	1.29	0.15–2.44	0.03
6 wk			
Actively employed	0.01	−0.01 to 0.02	0.28
Score ODI	0.08	0.06–0.10	<0.000
High-risk ÖMSPQ (score >105)	2.57	1.61–3.53	<0.000
Clinical examination			
Sensory loss	1.33	0.45–2.20	0.00
Power deficit	−0.30	−1.21 to 0.60	0.51
Reflex deficit	0.31	−0.65 to 1.27	0.52
Positive leg-raise	2.06	1.04–3.09	0.00
1 or more clinical tests positive	0.14	−1.07 to 1.34	0.82
2 or more clinical tests positive	1.46	0.58–2.33	0.00
3 or more clinical tests positive	1.64	0.70–2.58	0.00
NRS leg-pain (1–10)	0.51	0.37–0.65	<0.000
Not receiving lumbar surgery within follow-up time (12 mo)	1.24	0.39–2.09	0.005

B indicates unstandardized beta coefficient; BMI, body mass index; NRS, Numeric Rating Scale; ODI, Oswestry Disability Index; ÖMSPQ, Örebro Musculosceletal Pain Questionnaire.

factors. The question, however, arises whether some of these patients would have benefited from surgical intervention. We must acknowledge that clinicians may possibly discriminate psychosocial high-risk patients when offering surgery in the unjust fear of poor surgical results.

Leg-pain as a reliable prognostic factor concerning the eventuality of lower back surgery is well recognized in the literature,[24] but there are conflicting results regarding the association between self-reported leg-pain severity in the initial stage of sciatica and the patients' final outcome.[10,11] Our results showed that self-reported leg-pain at hospital admission had little predictive ability in the multivariate model, but that leg-pain recorded 6 weeks was strongly associated with leg-pain at 12 months. This finding indicates the importance of assessing leg-pain not only in an acute phase, but also at a follow-up consultation. This dramatic and rapid change in leg-pain severity may be one reason for the conflicting results found in similar studies regarding the association between baseline (initial) sciatic pain severity and sciatic pain chronicity.[10,11]

TABLE 3. Final Multivariate Model Showing Prognostic Factors Assessed at Baseline, and Their Impact on Leg-Pain Measured at 12 Months

Final Model						
Baseline						
Dependant Variable = leg-Pain at 12 mo						
	All Patients Irrespective of Treatment, n = 144, $F(6, 137) = 6.9$, $P < 0.000$, $R2 = 0.23$		Nonsurgical Treatment, n = 57, $F(5, 51) = 6.9$, $P < 0.000$, $R2 = 0.42$		Surgical Treatment, n = 87, $F(5,81) = 3.2$, $P < 0.01$, $R2 = 0.17$	
Prognostic Factors	B (95% CI)	*P*	B (95% CI)	*P*	B (95% CI)	*P*
Age	0.02 (−0.01 to 0.06)	0.22	0.00 (−0.07 to 0.06)	0.88	0.03 (−0.07 to 0.06)	0.10
Sex (female)	0.44 (−0.37 to 1.25)	0.28	0.88 (−0.55 to 2.31)	0.22	0.47 (−0.44 to 1.39)	0.31
Baseline leg-pain	−0.08 (−0.25 to 0.10)	0.40	0.01 (−0.23 to 0.25)	0.92	−0.18 (−0.44 to 0.75)	0.16
Not receiving lumbar surgery	1.11 (0.29–1.93)	0.01				
Baseline "high-risk" ÖMSPQ (score >105)	1.55 (0.72–2.38)	<0.001	3.26 (1.89–4.63)	<0.001	0.49 (−0.48 to 1.47)	0.32
Not actively employed	1.47 (0.63–2.31)	<0.01	2.05 (0.64–3.46)	<0.01	1.42 (−0.42 to 2.42)	<0.01
Excluded variables						
Education ≤12 yr, baseline ODI, previous lumbar surgery, leg-pain <3 mo						

B indicates unstandardized beta coefficient; BMI, body mass index; NRS, Numeric Rating Scale; ODI, Oswestry Disability Index; ÖMSPQ, Örebro Musculosceletal Pain Questionnaire; R^2, Nagelkerke R^2; SD, standard deviation.

Our results suggest that a 6-week postadmission simple NRS leg-pain assessment by either phone or email would be of value and perhaps sufficient when assessing a patient's long-term leg-pain prognosis. Similarly, the use of the ÖMSPQ as a prognostic tool in an early stage of hospital-based sciatic treatment may not only better inform the patients and their general practitioners of long term prognosis, but may also further facilitate interventional research and possibly direct specific treatment toward patients with a high risk of persisting symptoms. Further research is needed to confirm these patients as a target group for interventional research and to evaluate the specific use of psychosocial screening tools such as the ÖMPSQ in the treatment of acute sciatica.

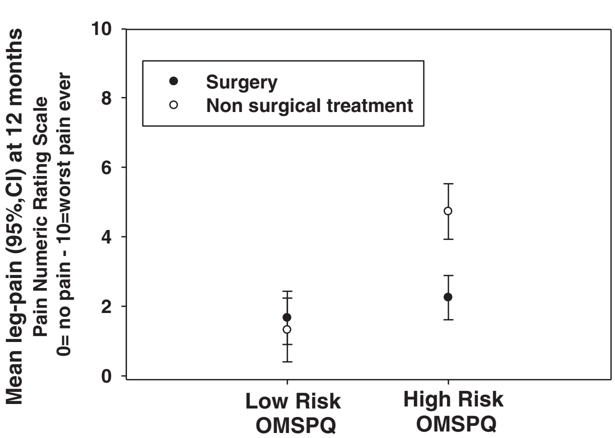

Figure 3. Statistical interaction between the Örebro Musculosceletal Pain Questionnaire (ÖMSPQ) and the given treatment. High-risk ÖMSPQ patients receiving surgical treatment reported a significantly lower mean (95% CI) leg-pain score at 12 months when compared with nonsurgically treated high-risk ÖMSPQ patients.

➢ Key Points

- ❑ The long-term outcome for patients admitted to hospital with acute sciatica is generally unfavorable.
- ❑ The following prognostic factors were significantly associated with persistent sciatic leg-pain at 12 months: high baseline scores on a psychosocial screening tool, not actively employed upon admission, not receiving lumbar surgery within a follow-up period of 1 year, and high levels of leg-pain recorded 6 weeks posthospital admission.
- ❑ The results suggest that assessing psychosocial profile and levels of leg-pain are important when determining patient prognosis in acute sciatica.

TABLE 4. Final Multivariate Model Showing Prognostic Factors Assessed at 6 Weeks, and Their Impact on Leg-Pain Measured at 12 Months

Final Model		
6-wk Assessment		
Dependant Variable = Leg-Pain at 12 mo, n = 140		
$F(4, 135) = 13.4$, $P < 0.000$, $R2 = 0.28$		
Prognostic factors	**B (95% CI)**	***P***
Age	−0.00 (−0.04 to 0.03)	0.81
Sex (female)	0.02 (−0.77 to 0.81)	0.95
Not receiving lumbar surgery	0.69 (−0.13 to 1.50)	0.10
6-wk assessment leg-pain	0.48 (0.34–0.63)	<0.001
Excluded variables		
Education ≤12 yr, ODI score at 6 wk, previous lumbar surgery, leg-pain for <3 mo, not actively employed, 6-wk ÖMSPQ, positive leg-raise test, ≥3 abnormal clinical tests at 6 wk		

B indicates unstandardized beta coefficient; BMI, body mass index; NRS, Numeric Rating Scale; ODI, Oswestry Disability Index; ÖMSPQ, Örebro Musculosceletal Pain Questionnaire; R^2, Nagelkerke R^2; SD, standard deviation.

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