108 - AGREEMENT BETWEEN THE TEST IN SITTING DURAL DISTENSION (SLUMP TEST) AND DIAGNOSTIC TEST LASÉGUE PHYSIOTHERAPEUTIC OF LUMBOSCIATALGIA

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INTRODUCTION

The sciatic pain is defined as a disease affecting the lower portion of the spine, characterized by symptoms that suggest a greater irritation of the nerve root lumbar (BRONFORT et al, 2000). Its incidence is between L4-L5 and L5-S1, and in 95% of cases the root is affected L5 or S1 (ALBUQUERQUE, 2008).

Signs and symptoms of low back pain include lumbar pain with radiation for a specific dermatome member with significant intensity, burning sensation, or paresthesia (AWARD; MOSKOVICH, 2006).

The evaluation of neural tension has fundamental character both for diagnosis and for the treatment of patients with musculoskeletal disorders. In this context, it is observed that the application of neural tension contributes to the development of a more reliable diagnosis and thus significantly influences the clinical course of the patient and the proposed treatment to be performed (MACHADO, BIGOLIN, 2010).

The test and test Lasègue seated dural distension (Slump Test) have been developed to verify that the presence of neural tension and thus direct the best treatment alternative compression syndromes of the lumbar spine. The Test Lasègue is the most significant for the diagnosis of lumbar disc herniation, sciatica differentiating the pain of the hip joint (FERNANDEZ et al, 2012). The Slump test was described as a test to evaluate the mobility of pain-sensitive structures in the vertebral canal, and has since been used as a tool for assessment and identification of lower limb neurodynamic changes, as well as treatment (MAITLAND, 1985).

Basing on the widespread lack of studies in the literature that propose to examine the correlation between specific tests for neurological sciatic nerve, are necessary research to solidify the correlation between neurological tests used in clinical practice for diagnosis of physiotherapy lumbosciatalgia. Thus, the objective of this study was to investigate the correlation between the test seated dural distension (Slump test) and test Lasègue in physical therapy diagnosis of low back pain.

METHODOLOGY

This study characterized as observational, cross-type controlled trial and was approved by the Research Ethics Committee of the State University of Western Paraná (UNIOESTE) under the opinion 197/2012.

Sample

The research sample consisted of 23 volunteers between 30 to 55 years, making the GL (GL = Group lumbosciatalgia) with clinical diagnosis, selected intentionally and from the Center for Physical Rehabilitation UNIOESTE.

Criteria for inclusion and exclusion

Inclusion criteria took into account the presence of low back pain using clinical diagnosis as well as the availability of volunteers to participate in physical therapy evaluations through the tests used in the study, the dates and times determined previously. Exclusion criteria were: volunteers who were absent for more than twice in any of the physical therapy evaluations, individuals with deformities in the lower limbs, paresthesia in patients with pelvic and / or perianal, carried some central neurological injury and heart disease not controlled, history of fractures in the spine and lower limbs in the last year, individuals who underwent a surgical procedure on the spine, hip or lower limb in the last four months, individuals who had painful symptoms more than six (6) Scale Visual Analogue Pain.

Procedures

After approval by the Ethics in Research Involving Human Subjects of the State University of West Paraná-UNIOESTE volunteers were interviewed by a screening form developed by the researchers, in order to filter the information collected and identify possible criteria exclusion criteria. Then, the volunteers underwent physiotherapy assessment made by Slump Test. Subsequently the said physical therapy evaluation was performed again, being composed of the Test Lasègue.

The evaluations were conducted in two stages. The initial assessment (1st Evaluation) was composed of two phases, with initially evaluated the intensity of pain by VAS volunteer and later by the Slump test. The second evaluation (2nd evaluation) was performed in the same way that the initial assessment, based on the assessment made by EVA and subsequently test Lasègue. Assessments that comprise this study were performed with an interval of 7 days, the same performed by two reviewers, and the first was responsible for the evaluation and the other 1st evaluator was responsible for the next evaluation, 2nd Evaluation of all volunteers.

Assessment of Pain Intensity

We used the Visual Analog Scale of Pain (SERRANO, 2002) (Figure 1). This was plotted as a line of 10 cm so that the zero represents the landmark of the landmark 10 left and right. Initially, the evaluator asked the volunteer about the intensity of their pain at the time, with the same rated the Zero (no pain) to 10 (maximum pain). In representation of the scale, marking the point 0 (zero) represents no pain and 10 (ten), represents maximum pain.

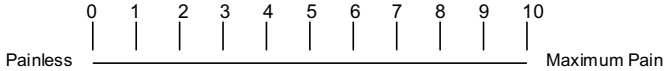

Figure 01 - Visual Analog Scale of Pain

Test seated dural distension (Slump Test)

The test was performed according to the description of (MAGGE, 2010), in which the patient is positioned on the edge

of the table with the legs supported, the hips in a neutral position and your hands behind your back. Was first asked to volunteer for that posture the lumbar and thoracic spine in flexion. The assessor maintained the patient's chin in a neutral position to avoid bending the neck and head. Then, the appraiser used an arm to apply pressure on the shoulders. While this position kept the evaluator asked the patient to actively flex the cervical spine and head as much as possible. Then an overpressure applied to keep the bending of the three portions of the column. Using the same hand of the member to maintain the pressure in the cervical spine. With the other hand, it keeps the patient's foot in maximum dorsiflexion. While the examiner maintained these positions even asked the patient to actively extend the knee as much as possible. The test was repeated with the other leg and then with both members simultaneously. If the patient was unable to fully extend the knee pain due to the examiner removed the pressure on the cervical spine and patient extends the neck.

Test Lasègue

According to the description of MAGGE (2010), the test was performed with the patient fully relaxed. With the patient supine, the hip internal rotation in adduction and knee extended, the examiner flexed the hip to the patient complains of pain or contraction in the back or the back of the leg. Next, the examiner slowly and carefully lowered the leg, that is subjected to the same extent slightly until the patient no longer feel pain or contraction. Then, the examiner to the patient requested that the flex neck so that the chin leaned chest, and then held foot dorsiflexion of the patient. The test was considered positive when the volunteer complained of pain or paresthesia in deter ¬ nothing angulation (between 30 º and 70 º).

Statistical Analysis

The statistical procedure was performed by analysis of Concordance KAPPA. It was considered the reliability values assigned by KAPPA. The level of significance was set at $p < 0.05$.

RESULTS

According to the mean of the VAS assessment of pain (Table 1), it can be said that the painful symptoms was higher in the 2nd assessment when compared with the 1st evaluation.

	Slump test	Teste de Lasègue
DOR (EVA)	3,52±1, 05	3,92±1, 10

Table 1. Average rating (VAS)

It can be observed from Table of Kappas for categories (Table 2), the kappa value was equal for both categories (K: 0324). Being the same: Category 1: p (Positive); Category 2: n (negative). The Kappa measure of agreement has the maximum value to 1 (total agreement). The value found for Kappa (K: 0324) fall in the level of disagreement between the neurological tests used in this study.

	Cat. 1 p	Cat. 2 n
Kappa da categoria	0.324	0.324
P-valor do Kappa da categoria	0.121	0.121
Intervalo de 95% de confiança do Kappa da categoria	**sup:** 0.732 **inf:** -0.085	**sup:** 0.732 **inf:** -0.085

Table 2. Table with the Kappas for categories

According to the value obtained for the P-value Overall it can be seen that there was no statistically significant difference ($p > 0.05$) in both categories, ie, the value found was p = 0121 (Table 3) demonstrating discordance between the tests used for neurological sciatic nerve

Kappa geral	**0.324**
P-valor geral	0.121
Intervalo de 95% de confiança do Kappa	**sup:** 0.732 **inf:** -0.085

Table 3. Kappa Geral

DISCUSSION

In the present study, it was found that the neurological tests and test Slump Test Lasègue have no correlation with each other in patients with low back pain, ie, there was no statistically significant difference for such agreement. This result corroborates the study by Majlesi et al (2008), in which they showed that the Slump test has lower sensitivity compared to Lasègue test in patients with lumbar disc herniation. However, it was found that the test was slightly more specific Lasègue (0.89) than the slump test (0,83).

The Slump test can be used more often as a tool and sensitive physical examination in patients with symptoms of lumbar disc herniations. In contrast, the test Lasègue can especially help identify patients who have herniated associated with nerve root compression. Contrary to the results found by Bracht (2003), in which we evaluated 47 patients with low back pain syndromes with such tests. In the above study, it was concluded that the Slump test has greater reliability in physical therapy evaluation when compared with the test Lasègue. Furthermore, when the test Lasègue is used alone, has no significant diagnostic value. In a study conducted by Philip, Lew and Matyas (1989), which was evaluated 93 patients with symptoms of pain with pain irradiation, it was observed that the slump test was effective in reproducing the symptoms of these patients.

Contrary to the findings obtained in this study, Blanco (2007), observed that the Slump test and test Lasègue correlate well, showing that the two tests are susceptible to back pain and can be used. Such a discrepancy in the results shown in the

aforementioned studies may be attributed to the difference in sample size methodology.

It is necessary to emphasize the limitations encountered during the testing and Lasègue Slump test, with reference to numerous studies over the years. Care must be taken during application testing, not to consider the pain coming from the hamstrings, hip or sacroiliac joint, as the pain from neural tissues. The problem of false positive responses can be reduced assuming that originated the tissue pain. McCombe et al. (1989) reported that signs of nerve compression in the results of their study showed better agreement when considering a description of where the pain was experienced. These findings contrast with the results obtained in this study since it was considered the source of pain neural presented by volunteers and even then there was no correlation between neurological tests used.

In this context, we suggest the development of future research to examine the correlation of neurological tests specific to the impairment of the sciatic nerve with a larger sample of patients, in order to enrich the literary context as well as contribute to the clinical practice in physical therapy formulation a clinical diagnosis and therefore more reliable in developing appropriate behavior intervention.

CONCLUSION

Basing on the results obtained in this study, it is concluded that the test seated dural distension (Slump test) and test Lasègue showed no agreement on the diagnosis of low back pain physiotherapy.

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REFERENCES

ALBUQUERQUE, A. V. Lombalgia crônica sem ciatalgia: correlação entre o quadro clínico e a radiologia. Revista Neurociências. v. 16, n. 3, p. 184-188, 2008.

AWARD, R. A.; MOSKOVICH, R. Lumbar disc herniations: surgical versus nonsurgical treatment. Clinical Orthopaedics and Related Research, v. 443, p.183-97, 2000.

BRACHT, M. A. Estudo comparativo entre os testes Slump e Laségue em pacientes portadores de síndromes dolorosas da coluna lombar. Terapia Manual, v. 2, p. 46-51, 2003.

BLANCO, P. H. M.; MORAES, R. A. S.; FACCI, L. M. Análise da confiabilidade do teste de Lasègue e do teste de Slump para verificação da tensão neura. Fisioterapia Brasil, v. 8, n. 1, p. 25-30, jan./fev. ,2007.

FILHO, C. S. S.; SÁ, E. C. Utilidade diagnóstica dos procedimentos e medidas no exame clínico de radiculopatias lombossacrais segundo os princípios da Medicina Baseada em Evidências: revisão sistemática. Revista de Medicina (São Paulo), v. 90, n. 3, p. 133-143, jul./ set., 2011.

FERNANDEZ, J. S.; SERDEIRA, A.; ZIEGLER, M. S.; SEVERO, C. M . D.; ZARDO, E. A. Correlação do sinal de Lasègue e manobra da elevação da perna, retificada com os achados cirúrgicos em pacientes com ciatalgia portadores de hérnia discal lombar. Coluna/Columna. vol.11 no.1 São Paulo, 2012.

MACHADO, G, F, M.; BIGOLIN, S.E. Estudo comparativo de casos entre a mobilização neural e um programa de alongamento muscular em lombálgicos crônicos. Fisioterapia do Movimento, Curitiba, v. 23, n. 4, p. 545-554, out./dez., 2010.

MAITLAND, G. D. The Slump Test: Examination and treatment. Australian Journal of Physiotherapy. v.31, p. 215-219,1985.

MAJLESI, J. M. D.; TOGAY, H. M. D., NALAN, H. M. D, TOPRAK, S. M. D. The Sensitivity and Specificity of the Slump and the Straight Leg Raising Tests in Patients With Lumbar Disc Herniation. JCR: Journal of Clinical Rheumatology , v. 14, n. 2, 2008.

MAGEE, D.J. AVALIAÇÃO MUSCULOESQUELÉTICA. MANOLE, 2010.

MCCOMBE, P. F.; FAIRBANK, J. C.; COCKERSOLE, B. C. et al. Reproducibility of physical signs in low back pain. Volvo Award in Clinical Sciences. v.14, p. 908 –918, 1989.

PHILIP, K.; LEW, P.; MATYAS.; T. A. The inter-therapist reliability of the Slump test. Australian Journal of Physiotherapy. v. 35, p. 89-94, 1989.

AGREEMENT BETWEEN THE TEST IN SITTING DURAL DISTENSION (SLUMP TEST) AND DIAGNOSTIC TEST LASÉGUE PHYSIOTHERAPEUTIC OF LUMBOSCIATALGIA

ABSTRACT

Lumbosciatalgia is defined as a disease affecting the lower portion of the spine, characterized by symptoms that suggest a greater irritation of lumbar nerve root. Its incidence is between L4-L5 and L5-S1. Objective: To assess the agreement between the dural distension test in the sitting position (Slump test) and test Lasègue in physical therapy diagnosis of low back pain. Methodology: Volunteers of female and male subjects (n = 23), aged between 30 and 55 years, diagnosed with lomboaciatalgia constituted the sample group (GL = Group lumbosciatalgia) and submitted to two separate assessments, such as interval of 7 days between the same. The 1st evaluation was composed by pain assessment using a visual analog scale for pain (VAS) and the Slump test. Already the 2nd Grading was composed by pain assessment by visual analog scale for pain (VAS) and the Test of Lasègue. The level of significance was set at p > 0,05 Results: The assessment of pain by Visual Analogue Pain Scale (VAS), higher values were obtained for the painful symptoms in the 2nd Assessment (3.92 ± 1.10) when compared with the 1st Assessment (3.52 ± 1.05). Upon agreement test, we found the same Kappa values for both the categories (K: 0324). There was no statistically significant difference (p> 0.05) in both categories with p = 0121, showing discordance between the tests used for neurological sciatic nerve. Conclusion: It is concluded that the test seated dural distension (Slump test) and test Lasègue showed no agreement on the diagnosis of low back pain physiotherapy.

KEYWORDS: Physiotherapy; Sciatica; Low back pain.

ACCORD ENTRE LE TEST EN DISTENSION DURAL SITTING (SLUMP TEST) ET DIAGNOSTIC PHYSIOTHERAPEUTIQUE LASÉGUE TEST DE LUMBOSCIATALGIA

RÉSUMÉ

Lumbosciatalgia est définie comme une maladie qui affecte la partie inférieure de la colonne vertébrale, caractérisée par des symptômes qui suggèrent une plus grande irritation de la racine nerveuse lombaire. Son incidence est entre L4-L5 et L5-S1. Objectif: évaluer l'accord entre le test de distension dural en position assise (Essai d'affaissement) et Lasègue de test pour le diagnostic de physiothérapie de la douleur au bas du dos. Méthodologie: Les bénévoles de sujets féminins et masculins (n = 23),

âgés entre 30 et 55 ans, diagnostiqués avec lomboaciatalgia constituaient le groupe de l'échantillon (GL = Groupe lumbosciatalgia) et soumis à deux évaluations distinctes, comme intervalle de 7 jours entre les le même. La 1ère évaluation a été composée par évaluation de la douleur en utilisant une échelle visuelle analogique de la douleur (EVA) et le test d'affaissement. Déjà le deuxième classement a été composée par évaluation de la douleur par échelle visuelle analogique de la douleur (EVA) et le test de Lasègue. Le niveau de signification a été fixé à p <0,05 Résultats: L'évaluation de la douleur par échelle visuelle analogique (EVA), des valeurs plus élevées ont été obtenues pour les symptômes douloureux de la deuxième évaluation (3,92 ± 1,10) par rapport avec la première évaluation (3,52 ± 1,05). Si les essais accord, nous avons trouvé les mêmes valeurs Kappa pour les deux catégories (K: 0324). Il n'y avait pas de différence statistiquement significative (p> 0,05) dans les deux catégories avec p = 0121, montrant la discordance entre les tests utilisés pour nerf sciatique neurologique. Conclusion: Il est conclu que le test assis distension dural (Essai d'affaissement) et le test de Lasègue a montré pas d'accord sur le diagnostic de physiothérapie lombalgie.

MOTS-CLÉS: Physiothérapie; La sciatique; Douleur au bas du dos.

ACUERDO ENTRE LA PRUEBA EM EL QUE SE SIENTA DISTENSIÓN DURAL (ENSAYO DE ASENTAMIENTO) Y FISIOTERAPÉUTICOS DIAGNOSTIC TEST DE LASÉGUE LUMBOCIATALGIAS

RESUMEN

Lumbociatalgias se define como una enfermedad que afecta a la porción inferior de la columna vertebral, que se caracteriza por síntomas que sugieren una mayor irritación de la raíz nerviosa lumbar. Su incidencia es de entre L4-L5 y L5-S1. Objetivo: Determinar la concordancia entre la prueba de distensión dural en la posición sentada (test Slump) y Lasègue prueba en el diagnóstico de fisioterapia del dolor de espalda baja. Metodología: Los voluntarios de los sujetos de ambos sexos (n = 23), con edades comprendidas entre los 30 y 55 años, con diagnóstico de lomboaciatalgia constituyeron el grupo de muestra (GL = lumbociatalgias Group) y sometidos a dos evaluaciones independientes, como intervalo de 7 días entre la misma. La primera evaluación fue compuesto por la evaluación del dolor mediante una escala analógica visual para el dolor (VAS) y la prueba de asentamiento. Ya la segunda evaluación estaba compuesto por la evaluación del dolor mediante la escala analógica visual para el dolor (VAS) y la Prueba de Lasègue. El nivel de significación se fijó en p <0,05 Resultados: La evaluación del dolor mediante la escala visual analógica del dolor (VAS), valores más altos se obtuvieron para los síntomas dolorosos de la segunda evaluación (3,92 ± 1,10) en comparación con la primera evaluación (3,52 ± 1,05). A prueba de acuerdo, encontramos los mismos valores de Kappa, tanto para las categorías (K: 0324). No hubo una diferencia estadísticamente significativa (p> 0,05) en ambas categorías con p = 0.121, mostrando discordancia entre las pruebas utilizadas para el nervio ciático neurológico. Conclusión: Se concluye que la prueba sentado distensión dural (test Slump) y la prueba de Lasègue no mostró ningún acuerdo sobre el diagnóstico de fisioterapia del dolor de espalda.

PALABRAS CLAVE: Terapia Física; Ciática; Dolor de espalda baja.

CONCORDÂNCIA ENTRE O TESTE DE DISTENSÃO DURAL NA POSIÇÃO SENTADA (SLUMP TEST) E O TESTE DE LASÈGUE NO DIAGNÓSTICO FISIOTERAPÊUTICO DE LOMBOCIATALGIA

RESUMO

A Lombociatalgia é definida como sendo uma doença que acomete a porção inferior da coluna vertebral, caracterizada por sintomas que sugerem maior irritação da raiz nervosa lombar. Sua maior incidência encontra-se entre L4-L5 e L5-S1. Objetivo: verificar a concordância entre o Teste de distensão dural na posição sentada (Slump test) e o Teste de Lasègue no diagnóstico fisioterapêutico de Lombociatalgia. Metodologia: Voluntários dos gêneros feminino e masculino (n=23), idade entre 30 e 55 anos, com diagnóstico clínico de lomboaciatalgia constituíram o grupo amostral (GL=Grupo Lombociatalgia), sendo submetidos a duas avaliacoes distintas, como intervalo de 7 dias entre as mesmas. A 1ª Avaliação foi composta pela avaliação da dor por meio Escala Visual Analógica de Dor (EVA) e pelo Slump test. Já a 2ª Avaliacao foi composta pela avaliação da dor por meio da Escala Visual Analógica de Dor (EVA) e pelo Teste de Làsegue. O nível de significância adotado foi de p > 0,05 Resultados: Na avaliação da dor pela Escala Visual Analógica de Dor (EVA), foram obtidos valores maiores para a sintomatologia dolorosa na 2ª Avaliação (3,92± 1,10) quando comparada com a 1ª Avaliação (3,52±1,05). Ao realizar o teste de concordância, foram encontrados os mesmos valores de Kappa para ambas às categorias (K: 0.324). Não houve diferença estatisticamente significativa (p>0,05) em ambas as categorias sendo p=0.121, demonstrando discordância entre os testes utilizados para o comprometimento neurológico do nervo isquiático. Conclusão: Conclui-se que, o Teste de distensão dural na posição sentada (Slump test) e o Teste de Lasègue não apresentaram concordância no diagnóstico fisioterapêutico de Lombociatalgia.

PALAVRAS-CHAVES: Fisioterapia, Ciática, Dor lombar.