

“Impact of Facet Block Applied in Patients with Symptomatic Lumbar Disc Herniation”



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Submission: October 19, 2024; **Published:** November 18, 2024

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Abstract

Introduction: Herniated discs are the cause of 85% of cases of low back pain, which has repercussions on daily activities. Facet joint blocks have been applied to reduce low back pain in a fast way, the mentioned symptoms.

Objective: To determine the efficacy of facet joint block as a treatment of symptomatic lumbar disc herniation in patients aged from 25 to 65 years attended at the TMC Hospital during the period of October 2018 to September 2022.

Methodology: A retrospective, descriptive, cross-sectional study of patients between 25 and 65 years of age in whom facet joint block was performed in the Traumatology-Orthopedics service.

Results: From a sample of 150 patients, the average age was 48.55 years, with the highest frequency being women (59.3%), with L4-L5 (49%) and L5-S1 (41%) being the most frequent herniated discs. The procedure was effective in 95.3% of patients with reference to pain relief, 66.7% of patients presented a reduction of ≥ 15 points on the ODI scale. The frequency of recurrence at 1, 3 and 6 months was 19%, 44.7%, 92%, respectively.

Conclusion: The facet joint block is a procedure that allows immediate management of the symptoms of lumbar disc herniations, but its use does not prevent recurrences of the symptoms in the following months.

Keywords: Low back pain; Disk herniation; Facet block; Disability

Introduction

Spinal spondylosis or osteoarthritis at the lumbosacral level causes direct damage to the intervertebral discs and the cartilaginous pads, located in the spine, which are of utmost importance in the cushioning role between discs. The intervertebral discs are the most affected in the process of spondylosis, they lose their functional capacity and handling of mechanical activity, since the ligamentous and joint complex is compromised in its entirety by degeneration [1]. During the degeneration of the intervertebral disc, the integrity of the fibrous ring is affected, and its extracellular matrix is disorganized, causing an alteration of the integrity of the nucleus pulposus of the intervertebral disc, forming herniated discs [2].

Herniated disc is one of the most prevalent pathologies of the intervertebral disc, being present in 1 to 3% of the general population, which is characterized by the migration of the nucleus

pulposus to the spinal canal or the foramen [2-4]. A herniated disc at the lumbar level can form in the lumbosacral region, which when passing from the anatomical limits towards the posterior causes the clinical manifestation of compression with lumbar pain, whether or not there are radicular signs [1,4], being the result of an intervertebral degenerative sequence, however, the etiology must be considered as multifactorial, identifying genetic risk factors, the existence of repeated traumas, posture; and taking into account that overweight and obesity increase the mechanical load exerted on the lumbosacral spine, therefore, these elements have a determining role in lumbar pain [5].

Statistical data indicate that between 60 and 90% of humans will present a case of acute lumbar pain in the course of their lives, confirming that 5 to 40% will have radicular pain [6]. Lumbosciatica is caused by various etiologies, but intervertebral

disc herniation and other diseases derived from it represent more than 85% of cases [6]. Lumbar disc herniation with symptoms occurs most frequently between 30 and 50 years of age, with a high predominance in the male population [6,7]; with repercussions on the socioeconomic environment, being the main cause of absenteeism from work in active individuals [8]. The treatment of lumbar pain syndrome began with the use of certain

interventional therapies such as blocks, with facet blocks with intra-articular infiltration and of the medial branch of the dorsal ramus being one of the most established [6,7]. Facet joint blocks constitute the second most performed spinal procedure in the world, with 47.2% of the procedures, after epidural blocks and adhesiolysis procedures [7] (Chart 1).

| CÓDIGO ENCUESTA _____ | | | |
|---------------------------------------------------|------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------|
| NOMBRE (iniciales): _____ | | HC: _____ | |
| PERFIL SOCIO DEMOGRÁFICO | | | |
| EDAD | PROCEDENCIA | OCCUPACIÓN | INSTRUCCIÓN |
| GRUPO ETARIO | Urbana <input type="checkbox"/> | PROFESION DE ALTA CARGA FÍSICA <input type="checkbox"/> | Ninguno <input type="checkbox"/> |
| 25-39 años <input type="checkbox"/> | Rural <input type="checkbox"/> | PROFESION DE CARGA FÍSICA INTERMEDIA <input type="checkbox"/> | Primaria <input type="checkbox"/> |
| 40-55 años <input type="checkbox"/> | HÁBITOS | | Secundaria <input type="checkbox"/> |
| >55 años <input type="checkbox"/> | Alcohol <input type="checkbox"/> | Sedentarismo <input type="checkbox"/> | Superior <input type="checkbox"/> |
| | Tabaco <input type="checkbox"/> | Café <input type="checkbox"/> | ESPECIFIQUE: _____ |
| ANTECEDENTES TRAUMÁTICOS | APP | APQX | ALERGIAS |
| SI <input type="checkbox"/> | SI <input type="checkbox"/> | SI <input type="checkbox"/> | SI <input type="checkbox"/> |
| NO <input type="checkbox"/> | NO <input type="checkbox"/> | NO <input type="checkbox"/> | NO <input type="checkbox"/> |
| ESPECIFIQUE: _____ | ESPECIFIQUE: _____ | ESPECIFIQUE: _____ | ESPECIFIQUE: _____ |
| PERFIL NUTRICIONAL (IMC) | | | |
| PESO NORMAL <input type="checkbox"/> | | | |
| SOBREPESO <input type="checkbox"/> | | | |
| OBESIDAD GRADO I <input type="checkbox"/> | | | |
| OBESIDAD GRADO II <input type="checkbox"/> | | | |
| OBESIDAD GRADO III <input type="checkbox"/> | | | |
| CARACTERIZACIÓN DE LA HERNIA DISCAL LUMBAR | | | |
| NIVEL DE LESIÓN | PRESENCIA DE RADICULOPATIA | RAICES AFECTADAS | TIEMPO DE EVOLUCION |
| L3-L4 <input type="checkbox"/> | SI <input type="checkbox"/> | L3 <input type="checkbox"/> | <1 <input type="checkbox"/> |
| L4-L5 <input type="checkbox"/> | NO <input type="checkbox"/> | L4 <input type="checkbox"/> | 1-5 AÑOS <input type="checkbox"/> |
| L5-S1 <input type="checkbox"/> | | L5 <input type="checkbox"/> | >5 AÑOS <input type="checkbox"/> |
| | | S1 <input type="checkbox"/> | |
| DURACION DEL CUADRO ACTUAL | PRESENCIA DE SIGNO DE LASEGUE Y BRAGARD | GRADO DE DOLOR EVA | FUERZA MUSCULAR DANIELS |
| <2 <input type="checkbox"/> | POSITIVO <input type="checkbox"/> | 1 A 3 <input type="checkbox"/> | 1 <input type="checkbox"/> |
| 2 A 4 SEMANAS <input type="checkbox"/> | NEGATIVO <input type="checkbox"/> | 4 A 6 <input type="checkbox"/> | 2 <input type="checkbox"/> |
| >4 SEMANAS <input type="checkbox"/> | | 7 A 10 <input type="checkbox"/> | 3 <input type="checkbox"/> |
| | | | 4 <input type="checkbox"/> |
| | | | 5 <input type="checkbox"/> |
| | | | 6 <input type="checkbox"/> |
| PARESTESIAS | GRADO DE LIMITACION FUNCIONAL OWESTRY | | |
| SI <input type="checkbox"/> | 0 A 20 <input type="checkbox"/> | | |
| NO <input type="checkbox"/> | 21 A 40 <input type="checkbox"/> | | |
| | 41 A 60 <input type="checkbox"/> | | |
| | 61 A 80 <input type="checkbox"/> | | |
| TRATAMIENTOS PREVIOS | | | |
| TRATAMIENTO ORAL | TERAPIA FISICA | BLOQUEOS | CIRUGIA LUMBAR |
| ANALGESICOS TIPO AINES <input type="checkbox"/> | SI <input type="checkbox"/> | SI <input type="checkbox"/> | SI <input type="checkbox"/> |
| ANALGESICOS TIPO OPIODES <input type="checkbox"/> | NO <input type="checkbox"/> | NO <input type="checkbox"/> | NO <input type="checkbox"/> |
| OTROS <input type="checkbox"/> | | | |
| CARACTERIZACION DEL BLOQUEO | | | |
| NIVEL DEL BLOQUEO | LATERALIDAD | USO DE APOYO RADIOLOGICO | COMPLICACIONES |
| L3-L4 <input type="checkbox"/> | BILATERAL <input type="checkbox"/> | FLUOROSCOPIA <input type="checkbox"/> | SI <input type="checkbox"/> |
| L4 <input type="checkbox"/> | IZQUIERDO <input type="checkbox"/> | OTRO <input type="checkbox"/> | NO <input type="checkbox"/> |
| L4-L5 <input type="checkbox"/> | DERECHO <input type="checkbox"/> | | ESPECIFIQUE: _____ |
| L5-S1 <input type="checkbox"/> | | | |
| EFICACIA | | | |
| PRESENCIA DE SIGNO DE LASEGUE Y BRAGARD | GRADO DE DOLOR | FUERZA MUSCULAR | PARESTESIAS |
| SI <input type="checkbox"/> | 1 A 3 <input type="checkbox"/> | 1 <input type="checkbox"/> | SI <input type="checkbox"/> |
| NO <input type="checkbox"/> | 4 A 6 <input type="checkbox"/> | 2 <input type="checkbox"/> | NO <input type="checkbox"/> |
| | 7 A 10 <input type="checkbox"/> | 3 <input type="checkbox"/> | |
| | | 4 <input type="checkbox"/> | |
| | | 5 <input type="checkbox"/> | |
| GRADO DE LIMITACION FUNCIONAL | TIEMPO DE REINSERCIÓN LABORAL | EXACERBACION DE LA ENFERMEDAD A LOS 3 MESES | EXACERBACION DE LA ENFERMEDAD A LOS 6 MESES |
| 0 A 20 <input type="checkbox"/> | 15 DIAS <input type="checkbox"/> | SI <input type="checkbox"/> | SI <input type="checkbox"/> |
| 21 A 40 <input type="checkbox"/> | >15 DIAS <input type="checkbox"/> | NO <input type="checkbox"/> | NO <input type="checkbox"/> |
| 41 A 60 <input type="checkbox"/> | | | |
| 61 A 80 <input type="checkbox"/> | | | |

Chart 1: Annex of questionnaire carried out in clinical consultations of patients with HDL and facet block.

*Survey format prepared by the authors.

The facet block technique consists of infiltrating, within the joint or the medial branches of the spinal nerve, a local anesthetic accompanied by a steroid [2,3,8]. This technique fulfills two functions, the first through the corticosteroid decreases the inflammation and the second through the anesthetic, the pain is improved [1,6,8], where the joint facets are located, and the mixture of local anesthetic (bupivacaine 0.25%) and long-acting steroids is placed [7-9]. Through advanced studies, it is possible to know that within the pathophysiology of the herniated disc there is the intervention of cellular and molecular mediators that induce inflammation around the site of the intervertebral disc and the nerve root involved, explaining the usefulness of corticosteroids on the facet [10,11]. In conclusion, lumbar disc herniations are one of the diseases with a significant impact in several areas, with spontaneous resolution in most cases and conservative management of choice [6,7].

This research work is aimed at analyzing the effectiveness of facet block as a treatment for symptomatic lumbar disc herniations, treated at the Teodoro Maldonado Carbo Specialty Hospital, during the period from September 2020 to October 2021. With this research, we aim to establish the indications for facet blocks in this pathology, and in which cases it does not have a strong recommendation as a treatment. We attempt to verify whether facet block presents any benefit in resolving episodes of low back pain, as well as any improvement in functional capacity and lifestyle in the long term.

Methodology

Descriptive, cross-sectional, non-experimental study, which used as a population adults with symptomatic lumbar disc herniation undergoing facet block at the Teodoro Maldonado Carbo Hospital in the period October 2020 - September 2021, which gave a total of 300 patients, based on the collection of data in the hi Medical records under the AS400 system of the patients treated, having a questionnaire prepared in relation to the variables under study, discarding inclusion and exclusion criteria, determining a total of 150 for the total sample. Sociodemographic data were collected, level of the herniated intervertebral disc, previous treatments, level of blockage, severity of symptoms and functional limitation pre- and post-treatment, complications, recurrence of the clinical picture, filled out through a survey format as shown in the annexes (graph 1), which were subjected to statistical analysis under SPSS and Excel software.

Within the inclusion criteria, the following were considered:

1. Adults between 25-65 years of age were treated in the Traumatology outpatient clinic in the period October 2020-September 2021.
2. Patients with lumbar disc herniation who present with lumbosciatica or signs and symptoms of radiculopathy associated with EVA greater than 4, diagnosed under nuclear magnetic resonance.

3. Patients who were treated with analgesics or physical therapy without symptom relief at 4 weeks.
4. Patients undergoing the block with a complete pre- and post-treatment clinical history up to 6 months.
5. For exclusion criteria: Patients with lumbar disc herniation with severe or progressive neurological deterioration.
6. Patients with warning signs and symptoms characteristic of cauda equina syndrome with paresis, fecal and urinary incontinence, with saddle anesthesia.
7. Patients whose lumbosciatica or radiculopathy is attributed to other pathologies such as inflammatory diseases, malignant tumors, infections, osteoporotic fractures, etc.
8. Patients treated with an age under 25 years and over 65 years.
9. Patients who did not consent to undergo the procedure.
10. Patients with insufficient data in clinical history about clinical picture pre- and post-treatment at 6 months.

Results

After the exhaustive analysis at the Teodoro Maldonado Carbo Specialty Hospital, it was determined that of the 100% of patients included with a diagnosis of lumbar disc herniation who underwent a facet block during the period from October 2018 to September 2022, their presentation was predominantly female, with a total of 89 women (59.3%), compared to men with 40.7% of presentation, as shown in Table 1. The incidence of lumbar disc herniations has a fairly constant presentation in all age groups, with little percentage difference, with an average of 48.55. Herniated discs occur most frequently in patients over 55 years of age (35.3%), followed closely by patients between 40 and 55 years of age (34%), and the lowest incidence occurs between 25 and 39 years of age (30%), as can be seen in Table 1. The vast majority of patients treated at HTMC are of urban origin (96.7%), which coincides with the location of the institution. Regarding the nutritional status of the patients studied, 48.7% are overweight and 24.7% have grade I obesity, as shown in Table 1.

Of the group of patients participating in this research, 62% are called "active" because of their work condition, with a high physical load, which infers that it involves physical activities or constant weight lifting, while the "passive" type of work, with 31% of the sample, consists of office work in which the patient spends a lot of time in a sedentary lifestyle. 7% of the patients studied do not work or are engaged in housework. Regarding comorbidities, 68.67% were positive for this item, with cardiovascular and endocrine diseases being the most prevalent. In addition, 65.33% of the patients did not have a history of trauma, while the remaining percentage (34.67%) did. Of the patients included in this study, the majority did not report any pharmacological allergy to analgesics (95.33%), 5 patients reported allergy to NSAIDs (3.33%), 1 to paracetamol and 1 to tramadol, as shown in Table 2.

Table 1: Epidemiological characteristics of patients with HDL treated with facet blockade at the HTMC in the period October 2018-September 2022.

| Variable | Frecuencia | Porcentaje |
|---------------------------|------------|------------|
| Genero | | |
| Femenino | 89 | 0.593 |
| Masculino | 61 | 0.407 |
| Total | 150 | 100% |
| Edad | | |
| De 25 a 39 años | 46 | 30.67% |
| De 40 a 55 años | 51 | 34% |
| >55 años | 53 | 35.33% |
| Total | 150 | 100% |
| Procedencia | | |
| Urbana | 145 | 96.70% |
| Rural | 5 | 3.30% |
| Total | 150 | 100% |
| Estado nutricional | | |
| Normal | 27 | 18% |
| Sobrepeso | 73 | 48.70% |
| Obesidad grado I | 37 | 24.70% |
| Obesidad grado II | 12 | 8% |
| Obesidad grado III | 1 | 0.60% |
| Total | 150 | 100% |

*Source: IESS medical history registry

**Prepared by the authors

Table 2: Frequency of occupation, comorbidities and history in patients with HDL treated with facet block.

| Variable | Frecuencia | Porcentaje |
|---------------------------------|------------|------------|
| Tipo de ocupacion | | |
| Activo | 92 | 62% |
| Pasivo | 47 | 31% |
| No trabaja | 11 | 7% |
| Total | 150 | 100% |
| Comorbilidades | | |
| ***Enf. cv | 17 | 11.33% |
| ****Enf. end | 31 | 20.67% |
| *****Enf. art musc y art. | 8 | 5.33% |
| *****Enf. dig. | 12 | 8.00% |
| *****Enf. sist. inm. | 1 | 0.67% |
| Cáncer | 1 | 0.67% |
| Enf. cv, enf. end | 22 | 14.67% |
| Enf dig, enf end | 2 | 1.33% |
| Enf cv, enf end, enf dig | 2 | 1.33% |
| Enf. art musc y art., enf. dig. | 3 | 2.00% |
| Enf. cv, enf. end, cancer | 1 | 0.67% |
| Enf. art musc y art., enf. end. | 1 | 0.67% |

| | | |
|------------------------------------------------|-----|--------|
| Enfermedad cv, enf. end, enf. art musc y art., | 1 | 0.67% |
| Enf. cv, enf. end, ETS | 1 | 0.67% |
| *****NR | 47 | 31.33% |
| Total | 150 | 100% |
| Antecedentes traumatológicos | | |
| SI | 52 | 34.67% |
| NO | 98 | 65.33% |
| Total | 150 | 100% |
| Alergias a analgesicos | | |
| Paracetamol | 1 | 0.67% |
| AINES | 5 | 3.33% |
| Tramadol | 1 | 0.67% |
| NR | 143 | 95.33% |
| Total | 150 | 100% |

*Source: IESS clinical history registry

**Prepared by the authors

*** Cardiovascular disease

**** Endocrine disease

***** Musculoskeletal disease

***** Digestive disease

***** Immune system disease

***** Not reported

According to the affected lumbar section, the most frequently herniated intervertebral discs were reported to be L4-L5 with 49%, followed by L5-S1 with 41%. Furthermore, it is reported that the majority of patients (74%) have more than one herniated intervertebral disc, with L4-L5+L5-S1 (57%), L3-L4+L4-L5 (8%), followed by L3-L4; L4-L5; L5-S1 (7%) being the most frequent combinations among the 150 patients, as shown in Table 3.

With respect to the natural history of the disease, a mean of 4.3 years was found, with the interval of 4 to 6 years (41%) being the most frequent of presentation. The mean duration of the current lumbosciatica was 9.6 weeks. Previous treatments used in the population include analgesics, physical therapy, epidural blocks, previous facet blocks, etc. The most frequent combination is that of NSAIDs, opioid analgesics and physical therapy (64%), as shown in Table 3.

As for the analogue pain scale, it was found that 89.33% with symptomatic herniated disc who attended the consultation had very severe lumbar pain, with an average of 7.95. The majority of patients, 96.67%, had a moderate pre-treatment functional limitation according to the Oswestry disability scale, obtaining an average of 30.1, as for the physical examination, this was positive with the Lasegué and Bragard sign in 95.33. According to the Daniels scale, pretreatment muscle strength in patients was

greater than or equal to 3 (94%) in most patients, obtaining a mean of 3.47, as shown in Table 4.

The majority of patients (95.3%) with symptomatic herniated disc after treatment had an improvement in pain, with 143 patients obtaining a VAS equal to or less than 3 post-treatment. The results of the Oswestry disability scale in patients treated with facet block were favorable in the majority (66.7%), since these patients obtained a reduction ≥ 15 points after the block. Of the total number of patients who underwent facet block, 100% had an improvement in muscle strength with a score greater than or equal to 3, as shown in Table 5. When reviewing the complications after facet block, the majority of patients, 98.67%, did not present immediate, mediate or late complications, only found 2 cases of late complications associated with pain and respective local infections, as shown in Chart 2.

The return to work of the majority of patients (92%) was within the interval of 15 to 20 days. When evaluating the recurrence of the symptoms of lumbar disc herniation in the treated patients, it was found that the majority (80.7%) had no relapse one month after treatment. When evaluating the recurrence of symptoms at 3 months of lumbar disc herniation in treated patients, equivalent results were found, obtaining that 55.3% had no recurrence and 44.7% had relapses of the clinical

picture at 3 months post-treatment. When evaluating the relapse of symptoms of lumbar disc herniation in treated patients, it was found that 92% had recurrence and 8% had no relapses of the clinical picture at 6 months post-treatment, as detailed in Table 6.

Table 3: Clinical characteristics of patients with HDL treated with facet block at the HTMC in the period October 2018-September 2022.

| Variable | Frecuencia | Porcentaje |
|-----------------------------------------------------------------------------------|------------|------------|
| Nivel de hernia discal | | |
| L1-L2 | 0 | 0% |
| L2-L3 | 0 | 0% |
| L3-L4 | 1 | 1% |
| L4-L5 | 24 | 16% |
| L5-S1 | 14 | 9% |
| L3-L4+L5-S1 | 1 | 1% |
| L3-L4+L4-L5 | 12 | 8% |
| L1-L2+L4-L5 | 1 | 1% |
| L4-L5+L5-S1 | 86 | 57% |
| L2-L3+L4-L5+L5-S1 | 1 | 1% |
| L3-L4+L4-L5+L5-S1 | 10 | 7% |
| Total | 150 | 100% |
| Tiempo de evolución (años) | | |
| <1 año | 8 | 5% |
| 1 a 3 años | 54 | 36% |
| 4 a 6 años | 61 | 41% |
| >6 | 27 | 18% |
| Total | 150 | 100% |
| Tipo de tratamiento previo | | |
| ***AINES | 16 | 11% |
| Opioides | 5 | 3% |
| AINES + terapia física | 9 | 6% |
| AINES + opioides | 10 | 7% |
| AINES + opioides + terapia física | 96 | 64% |
| AINES + bloqueo facetario | 4 | 3% |
| AINES + opioides + terapia física+ bloqueo facetario | 3 | 2% |
| AINES + opioides + terapia física+ otros analgésicos | 2 | 1% |
| AINES + opioides + terapia física+ bloqueo epidural | 1 | 1% |
| Analgésicos tipo AINES + Analgésicos tipo opioides + terapia física+ laminectomía | 1 | 1% |
| AINES + Analgésicos tipo opioides + terapia física+ microdiscectomía lumbar | 3 | 2% |
| Total | 150 | 100% |
| Duración del cuadro actual de lumbociática | | |
| 5 a 8 semanas | 77 | 51% |
| >8 semanas | 73 | 49% |
| Total | 150 | 100% |

*Source: IESS clinical history registry**Prepared by the authors

***Non-steroidal anti-inflammatory drugs.

Table 4: Pretreatment clinical status of patients with HDL at HTMC.

| Variable | Frecuencia | Porcentaje |
|-----------------------------------------------------------|------------|------------|
| Intensidad de la lumbociática pretratamiento (EVA) | | |
| Moderado | 16 | 10.67% |
| Severo | 134 | 89.33% |
| Total | 150 | 100% |
| Limitación funcional (ODI) | | |
| Mínima limitación funcional | 0 | 0% |
| Limitación funcional moderada | 145 | 96.67% |
| Limitación funcional severa | 5 | 3.33% |
| Individuo invalido, dolor afecta toda calidad de vida | 0 | 0% |
| Total | 150 | 100% |
| Presencia de signo de Lasegué y Bragard | | |
| Positivo | 143 | 95.33% |
| Negativo | 7 | 4.67% |
| Total | 150 | 100% |
| Fuerza muscular de Escala de Daniels | | |
| Ausencia de contracción | 0 | 0% |
| Movimiento que no vence la gravedad | 9 | 6% |
| Movimiento completo que vence la gravedad | 62 | 41.30% |
| Movimiento con resistencia parcial | 78 | 52% |
| Movimiento con resistencia parcial | 1 | 7% |
| Total | 150 | 100% |

*Source: IESS medical history registry

**Prepared by the authors.

Table 5: Post-treatment clinical status of patients with HDL at HTMC.

| Variable | Frecuencia | Porcentaje |
|-----------------------------------------------------------|------------|------------|
| Intensidad de la lumbociática pretratamiento (EVA) | | |
| Leve | 143 | 95.30% |
| Moderado | 7 | 4.70% |
| Severo | 0 | 0% |
| Total | 150 | 100% |
| Limitación funcional (ODI) | | |
| Reducción de <15 puntos | 50 | 33.30% |
| Reducción de ≥ 15 puntos | 100 | 66.70% |
| Total | 150 | 100% |
| Presencia de signo de Lasegué y Bragard | | |
| Positivo | 16 | 95.33% |
| Negativo | 134 | 4.67% |
| Total | 150 | 100% |

| Fuerza muscular de Escala de Daniels | | |
|--------------------------------------|-----|------|
| <3 | 0 | 0% |
| ≥ 3 | 150 | 100% |
| Total | 150 | 100% |

*Source: IESS medical history registry

**Prepared by the authors

Table 6: Impact of facet block in patients with lumbar disc herniation.

| Variable | Frecuencia | Porcentaje |
|--------------------------------------------------|------------|------------|
| Tiempo de reinsercion laboral | | |
| 15 a 20 días | 138 | 92% |
| 21 a 30 días | 12 | 8% |
| Total | 150 | 100% |
| Recurrencia de sintomas al mes | | |
| Si | 29 | 19.3 |
| No | 121 | 80.7 |
| Total | 150 | 100% |
| Recurrencia de sintomas a los 3 meses | | |
| Si | 67 | 44.7 |
| No | 83 | 55.3 |
| Total | 150 | 100% |
| Recurrencia de los sintomas a los 6 meses | | |
| Si | 138 | 92 |
| No | 12 | 8 |
| Total | 150 | 100% |

*Source: IESS medical history registry

**Prepared by the authors

Discussion

In our population, lumbar disc herniation affects almost equally all age ranges, showing a slight increase in incidence with increasing age. Significant differences were seen in relation to sex. This may be due to the fact that the sample included in the study was not presented in a homogeneous manner. It is predominantly related to patients who have some type of active work, which agrees with the pathophysiology of the formation of these, due to the performance of movements in an inadequate manner or excessive lifting of weight in an incorrect position. All these parameters coincide with the study reported by Manchikanti et al. [12,13]. Under the implementation of the method established as the object of study, short-term clinical improvement is evident in most patients as stated in the study conducted by Ospina et al. which reported symptomatic improvement in 78% of participating patients, with similar data presented by our study, which showed an improvement in 95.3% in the visual analogue pain scale and a reduction of 15 points or more in the ODI [9] (Table 7).

Described as a rapid intervention that does not require general anesthesia, the facet block can be used to treat chronic lumbar and radicular pain in patients with herniated discs and can be repeated several times with minimal risk compared to surgical options [14]. However, it should be noted that the therapeutic effect is not predictable, having an expected duration of action of short life in most patients [14]. Cases have been reported in which there is a longer duration, but the long-term effects of the drugs used in the injection cannot be predicted. Pharmacokinetics is understood to mean that the immediate therapeutic effect of the blocks is due to the local anesthetic used, whose effect tends to dissipate in a few hours. On the other hand, corticosteroids have an onset of action in 2 to 3 days, with their pharmacological effect lasting between days to a few months. Despite the lack of evidence of its long-term action, it is considered an attractive, safe, fast and low-cost alternative, in addition to including an almost non-existent surgical risk as demonstrated by the study by Manchikanti et al. in which none of the possible complications such as rash, infection, reaction to any of the drugs, weight gain,

among others, were observed, results similar to those we present [14,13], in addition to this, the presence of several factors that can cause an earlier therapeutic failure must be considered, for

example, obesity, work with constant weight lifting, the type of hernia, the affected segments, among others [14].

Table 7: Measures of central tendency

| | | Edad | Peso | Talla | IMC | Tiempo de evolución (años) | Duración del cuadro actual (semanas) | Fuerza muscular pretratamiento | Escala EVA pretratamiento | ODI pretratamiento | Fuerza muscular postratamiento | Escala EVA postratamiento | ODI postratamiento | Tiempo de reinserción laboral (días) | Intervalo libre de enfermedad (días) |
|----------------------------|---------|--------|--------|-------|-------|----------------------------|--------------------------------------|--------------------------------|---------------------------|--------------------|--------------------------------|---------------------------|--------------------|--------------------------------------|--------------------------------------|
| N. | Válido | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| | Perdido | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Media | | 48.55 | 75.25 | 1.62 | 28.65 | 4.31 | 9.66 | 3.47 | 7.95 | 30.09 | 4.87 | 2.07 | 14.09 | 16.09 | 93.38 |
| Mediana | | 50 | 74 | 1.62 | 28.10 | 4 | 8 | 4 | 8 | 29 | 5 | 2 | 13 | 15 | 90 |
| Moda | | 61 | 70 | 1.56 | 26.22 | 4 | 12 | 4 | 4 | 28 | 5 | 2 | 11 | 15 | 90 |
| Desviación estándar | | 10.720 | 14.135 | 0.095 | 4.221 | 2.675 | 3.231 | 0.621 | 0.712 | 4.965 | 0.335 | 0.761 | 4.817 | 3.079 | 69.982 |
| Mínimo | | 26 | 47 | 1.41 | 19.23 | 0.2 | 5 | 2 | 7 | 20 | 4 | 1 | 4 | 10 | 2 |
| Máximo | | 65 | 123 | 1.9 | 40.24 | 15 | 20 | 5 | 10 | 45 | 5 | 5 | 29 | 30 | 365 |

*Source: IESS medical history registry

**Prepared by the authors

Conclusion and Recommendations

In the sample of patients with symptomatic lumbar disc herniation treated with facet block at the HTMC, out of a total of 150 patients, a comparable frequency was identified in the age groups, with a slight increase in adults over 55 years of age, predominance in females, the L4-L5 and L5-S1 discs were the most frequently found to be herniated, and considerable risk factors for disc herniation such as excessive body weight, occupation and trauma history were frequently found. Facet block is an effective method for the immediate management of patients with symptomatic lumbar disc herniation, since there was improvement in pain, functional limitation and other symptoms

in the majority of patients, while its short-term effect was limited after one month, with the frequency of recurrence increasing at 3 and 6 months.

Facet block is a viable, easily accessible, fast therapy with minimal complications for the treatment of lumbar pain associated with hernia, which allows for a better quality of life and timely reintegration into the workplace; in addition, its ability to be performed several times allows for adequate control of the symptoms. We recommend educating the population about the risk factors for lumbar disc hernias, in order to prevent or determine action strategies in affected populations. That facet block be proposed as an alternative and/or adjuvant conservative

therapy for the immediate management of the symptoms of this and less use of analgesic drugs, and that, through future studies, clinical practice guidelines be established for the use of blocks in this pathology. Health professionals should be trained about the advantages of using a facet block in patients with lumbar pain. Measures are recommended that promote a better lifestyle in relation to weight control and physical activity, as well as management of the same with physical therapy for muscle strengthening.

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DOI: [10.19080/OROAJ.2024.24.556127](https://doi.org/10.19080/OROAJ.2024.24.556127)

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