



# Lumbosciatica in Consultation in Neurology, University Hospital of Cocody Epidemiologic, Clinical, Therapeutic and Evolutionary Aspects

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## Abstract

The lumbosciatica, lumbo-neuralgic pain, is common. Their mechanisms are diverse. They are degenerative, infectious, inflammatory, tumoral, and traumatic. Their recurrence and their disabling aspect are responsible for a significant social and occupational disability, which is a cause of absenteeism. Our objective in this paper was to describe the epidemiological, clinical, paraclinical, therapeutic and evolutionary aspect of patients received in consultation. **Method of Study:** This transversal retrospective and descriptive study was conducted from December 2014 to February 2015 in Neurology Consultation at the University Hospital of Cocody. It included patients admitted for lumbosciatica, explored and treated. **Results:** Of the 150 lumbosciatica received for 1126 admissions (13.32%) 95 files were retained. The average age was 52.55 years. The predominance was female with 58 women (61.05%) over 37 men. Thirty-two patients (33.68%) had exposing occupation due to the prolonged sitting or standing position (*i.e.*, teachers, housewives and accountants). Pains were bilateral in 69 patients (72.64%). The lumbo-sacral spine scanner objectified degenerative lesions in 51.13% of the cases (45 patients). The clinical evolution under analgesic treatment and/or anti-inflammatory, and/or co-analgesics was favorable in 80% of cases (76 patients), with recurrence in 20% of cases (19 patients). **Conclusion:** The socio-economic impacts of lumbosciatica are important due to their recurrence. The treatment is often difficult due to the persistence of residual pain and recurrence. The identification of exposing professions and the education of these populations could prevent this disease by reducing the incidence and improving the patients' life quality.

## Subject Areas

Neurology

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## Keywords

Lumbosciatica, Etiology, Exposing professions, Treatment

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### 1. Introduction

The lumbosciatica is a lumbar pain with painful distal radiation in the lower limbs of radicular topography L5 or S1 [1]. It most often results from a disco-radicular conflict L4-L5 or L5-S1. The herniated disc is the main cause. It is common and can complicate long past low back pain [2]. The diagnosis is mainly clinical. The diagnosis has become easier thanks to new exploration techniques that are neuroradiology, computed tomography and magnetic resonance imaging (M.R.I). According to a study conducted in neurology consultation at Cocody, lumbosciatica was one of the most common reasons for consultation that is 21.4% (behind headache (55%)). They accounted for 57.1% of all neuralgia [3].

The objective of this study was to identify the socio-demographic, clinical, para-clinical, therapeutic and evolutionary aspects.

### 2. Materials and Methods

We conducted a retrospective, cross-sectional and descriptive study. It included patients received from 1 December 2014 to 28 February 2015 in consultation of Neurology at the University Hospital of Cocody (UHC). Selection criteria concerned all patients admitted for lumbo-sciatica, who were submitted to imaging and treated. The data collection was made by means of an index card of survey. The data collection was made by means of an index card of survey contains the demographic data (age sex occupation), the clinical data, periclinical data, therapeutic data, evolution. The data were seized and analyses by means of the Ear-information 6.00. We informed and obtained the consent of the patients; use of the data in medical purposes and data collection in a anonymous way.

### 3. Results

We selected 95 patients.

#### Socio-demographic data

The average age of patients was 52.55 years with extremes of 16 and 83 years. One noted a peak incidence in the age group 45 - 60 years, or 27.36% (26 patients). The rates were 4.21% for the age group 16 to 29, of 25.27% for 60 to 69, and 3.15% for 75 to 90 years. The predominance was female (n = 58) or 61.05% against 38.95% of men (n = 37). The sex ratio M/F was 0.64.

#### The occupation

Temporary worker patients constituted 41.05% of the cases (39 patients), 12.63% of household (12 patients), 9.47% traders (9 patients), teachers 6.32% (6 patients) and the military 5.26% (5 patients).

### **Clinical data**

**Consultation deadline:** The average of the first consultation was 19.6 months, 1 year and a half after the onset of pain, with extremes of 24 hours and 23 years. The median was at 1 and 2 years (with 10.52% of the patients each).

**Medical history:** Lumbosciatica occurred in 58.95% of cases (56 patients) with no medical history known. It was noted a medical history of heavy loads in 14.73% (14 patients), a drop of height in 5.20%, and 2 cases of lumbago.

### **The Types of Lumbosciatica**

The lumbosciatica reported were mechanical in 57 patients (60%). They were bilateral in 69 patients (72.64%), and were located in the L5 area in 32 patients (33.68%) and S1 in 35 patients (36.84%).

**The clinical examination** revealed a lumbar spinal stiffness in all patients with La-segue sign whose average level was 47.5° with a range of 10° and 90°. At the clinical examination, the root and spinal syndromes were respectively 70.52% (67 cases) and 100% (95 cases).

### **Preclinical data**

#### **Imagery**

The instruments were used to do plain radiographs and computed tomography (CT) in patients are 66 Bars and X-ray scanner. Plain radiographs of the lumbosacral spine were performed in 38 patients (40%). They objectified a disc disease in 28 patients, in 73.68% of cases. In 15.79% of cases, in 6 patients, we noted a spinal deformity (2 spondylolysis, and lordosis, a hump, a kyphoscoliosis, and scoliosis). In 5.27% of cases there was a nerve root, and one case (2.63%), sclerotic. The radiography of the spine was normal in 2.63% of patients.

Computed tomography (CT) scan of the lumbar spine was performed in 88 patients (92.7% of cases). It objectified disc diseases and herniated discs in respectively 22.73% of cases (20 patients) and 15.90% of cases (14 patients).

### **Therapeutic data**

#### **Medications and other prescribed therapeutic**

The medicines names which were used in the treatment of lumbosciatica are paracetamol, paracetamol codeine, paracetamol caffeine, tramadol, diclofenac, ibuprofen, and clonazepam or amitriptyline or Pregabalin in case of pain associated neuropathies. Drug prescriptions associated 2 molecules in 30 patients (31.58% of cases). This combination of therapy was made of the combination of analgesic-inhibitors recapture of the serotonin (SRIs) in 22 patients (23.15%). In 23.15% of cases (22 patients), the treatment was a monotherapy with an analgesic, a muscle relaxant, an anti-epileptic or a tricyclic antidepressant. In 23.15% of cases (22 patients), the treatment was a triple therapy, combining such diverse analgesics, anti-inflammatories, antidepressants and / or AEDs, a corticosteroid or a vitamin therapy. In 18.94% of cases (18 patients), patients received no drug treatment: 14 patients (14.73%), benefited from physical therapy and in 4 cases, the remission was spontaneous, with rest.

A quadritherapy tuberculosis etiological treatment combining Rifampicin, pyrazi-

namine, Ethambutol and streptomycin, was undertaken in 3 patients, with spinal tuberculosis epidural.

#### Evolution

After a month of treatment, we observed regression of symptoms in a proportion of 80% (76 patients). In 20% of cases (19 patients), pain persisted for several months.

## 4. Discussion

Lumbosciatica is a common reason for consultation in neurology. They represent the second cause of consultation after headache. In a study conducted in 2001, they represented 24% of all consultations with 19.2% of Neurology neuralgia and 4.8% of spinal pain. This frequency is probably underestimated given that many patients do not attend hospitals for various reasons. N'Zué *et al.* reported a hospital prevalence of 38.6% in 2002 [4]. It was 19.5% in Togo [5]. A study among hospital staff, said the prevalence of back pain in 11.2% in relation to 77% of cases of lumbosciatica [6]. The mean age was 52.55 years in our series. This rate is higher than those of N'Zué *et al.* Onambany *et al.*, with respectively 42.5 years, and 48 years [4] [7]. These lumbosciatica affect both young people and the elderly. According Kochbati *et al.* common lumbosciatica is a common pathology nowadays in subjects younger as well as in older patients [7]. Cheour *et al.* have described lumbosciatica in hospitalized patients over 65 years with a mean age of 71.2 years [8]. In our study, the majority of subjects with lumbosciatica was female. This predominance of female is reported by other authors such as Kpadonou, Cheour and N'Zué with respectively a sex ratio of 0.66; 1.88 and 0.72. For others, the predominance of male is clear [7] [9]. N'Zué *et al.* noted in over half the cases (69.2%) that lumbosciatica pain has do with subjects with sedentary work [4]. In our work, the populations most at risk were those with no fixed occupation, or 41.05% (Table 1). Temporary worker have the highest incidence rate of lumbosciatica because they are several activities at once to save their lives. It was usually people without qualifications, accepting the various work (usually painful, often soliciting the spine) for a generally minimal remuneration, barely covering their daily needs. Thus, 14.73% of patients (14 cases) were carrying heavy loads. Then come the housewives, shopkeepers and teachers. In the series of Kpadonou *et al.* in Benin, workers (25.4%) and office workers (18.2%) were the most affected [10]. For Onambany *et al.*, handling represented an occupational risk factor in 20% of cases [7]. Some authors divide the triggering circumstances of lumbosciatica between effort (48.2%) and unknown factors (48.2%) [4]. Thus, in our series, patients were carrying heavy loads in 14.73% (14 cases) a single case of lumbago was found in the medical history.

The occurrence of lumbosciatica was progressive in all patients (100%). Cheour in it's series, observed in 93.4% of cases, a gradual onset [8]. The lumbosciatica was usually bilateral, or 72.64% in our series (Table 2), against 47.6% in the series of Kpadonou *et al.* [10]. This bilateralism may be the cause of intermittent lameness in about 45% of cases [7]. However, the damage can be unilateral, particularly in cases of nerve root compression, as is the case of some degenerative diseases such as herniated disc [8]. It is

characterized by a unilateral radicular syndrome according to the L5 and S1 paths [7] [11].

**Table 1.** Distribution of patients according to their occupation.

Occupations	Totals (n = 95)	Percentages (%)
Housewife	12	12.63
Trader	9	9.47
Driver	3	3.15
Hairdresser	2	2.10
Teacher	6	6.32
Military	5	5.26
Healthcare agent	4	4.21
Secretary	2	2.10
Student	2	2.10
Librarian	1	1.05
Accountant	1	1.05
Advisor	1	1.05
Assistant trader	1	1.05
Cashier	1	1.05
Legal expert	1	1.05
Diplomat	1	1.05
Retired people	2	2.10
Bus driver	1	1.05
Pastor	1	1.05
Temporary worker	39	41.05

**Table 2.** Distribution of patients according to the types of lumbosciatica.

	Types	Numbers (n = 95)	Percentages (%)
<b>Location</b>	Unilateral	26	27.36
	Bilateral	69	72.64
	L4	12	12.64
	L5	32	33.68
	S1	35	36.84
	Not specified	7	7.36
<b>Time</b>	Mechanical	57	60
	Nightly	17	17.90
	Mixt	6	6.32
	Not specified	15	15.78

Plain radiography and CT scans were widely prescribed in our series (**Table 3**). No patients have realized the magnetic resonance imaging (MRI), due to the low socio-economic level of our patients. In our series, the most objective injuries to imaging, disk disease were respectively (71.05%), herniated discs (15.90%) and spinal deformities (15.79%). Kochbati *et al.* also reported a 99% of degenerative disc disease and 11% of herniated discs of lumbar spinal stenosis in elderly subjects at least 65 years [12]. But for some authors, the spinal stenosis and herniated disc are common etiologies lumbosciatica as in younger patients than in older patients [7] [8]. Choeur *et al.* study on common lumbosciatica the elderly, objectified in the lumbar CT, spinal stenosis and herniated disc in the same proportion, 22.7%, and a subsequent joint osteoarthritis in 45.5%. For others such as Cortet *et al.*, the facet joint osteoarthritis and spinal stenosis were frequent causes of lumbosciatica. Schobeiri *et al.* report nerve root compressions, ductal strictures, and protrusions disc L4-L5 and L5-S1, respectively in 70%, 37%, 29% and 24% [13]. Nevertheless, lumbosciatica may fall metastatic tumors of the spine and constituted the primary manifestation [14]. In African countries, the sciatica pain of inflammatory schedule with fever should be investigated first, bone and joint tuberculosis [15]. In our study, 3 of 88 patients showed spondylitis is associated with an epidural. For Haddada *et al.*, sciatica in the elderly has some specific clinical traits such as bilateralization, the trip badly systematized, and the frequency of intermittent lameness root. For these authors, should be eliminated in these elderly patients, a secondary lumbosciatica [5]. Indeed, these may be as much lumbosciatica as infectious tumor etiology, even in the elderly.

The therapeutic combination analgesics IRS-like amitriptyline was the most used (22.10%). It was identified 3 cases of spinal tuberculosis. Patients have benefited from the quadruple tuberculosis associated with corticosteroid therapy. The use of corticosteroids infiltrative way was done in a proportion of 8.42%. According to Valat *et al.* the epidural are very commonly used in daily practice [8] [16] [17]. Regarding the effectiveness, open studies are numerous and attest a good result in about 65% of cases [16].

**Table 3.** Distribution of patients according to the results of lumbar CT.

Results	Numbers (n = 88)	Percentages (%)
Disc disease	31	35.23
Normal	14	15.90
Disc herniated	14	15.90
Disco-radicular conflict	10	11.36
Deformations	5	5.69
Stenosis canal	4	4.55
Spondylitis with epidural	3	3.40
Collapsed vertebra	2	2.28
Osteocondensation	1	1.14
Sacralisation of L5	1	1.13

The surgical treatment of herniated disc remains conservative except in cases of lumbosciatica paralyzing, and the syndromes of the ponytail [17]. However, some authors emphasize the effectiveness of physiotherapy, lasting about 3 months on the regression intensity of the lumbosciatica [18]. In some African countries, it is common practice. In Tunisia, al Cheour and associate physical therapy in approximately 45% of their patients, with favorable developments in 85.7% of cases [8]. In our study, only 14 patients (14.73%), benefited from physiotherapy. It should be more often associated with drugs, given the benefit of the pain. However, the very small number of functional rehabilitation centers in public health facilities (4 in total) compared to various conditions treated by these centers is an obstacle. The disease is chronic, disabling, marked by episodes of relapses and remissions. Thus, the median age was 1 - 2 years, in our study, with 30 patients (31.57%) the early pains dated from 1 to 23 years. The average length of evolution of symptoms was greater than that of Breil, which was 9.2 months in its statement on the assessment of compliance with the ANAES recommendations regarding lumbosciatica, [19]. This evolution time even reached 23 years in a patient. This chronicity is likely to disturb the social and professional life of patients.

## 5. Conclusion

The chronicity of lumbosciatica is a clinical reality. The impact of pain on his patients' lives has an impact on socio-economy. The treatment is difficult because of the persistence of residual pain and recurrence. The high risk factors of lumbosciatica sent the occupations at risk and the advanced age. The identification of occupations exposed could help prevent the occurrence of these pains, reduce whenever possible the impact, and improve the quality of the patient.

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