

Patterns of Low Back Pain at Diagnosis in a Community Hospital in Lomé, Togo

Eyram Fianyo^{1*}, Fernando K. Lekpa², Kossivi Apetse¹, Yesu M. Limazié³, Mazamaesso Tchaou^{4,5}, Owonayo Oniankitan¹

¹Department of Medicine and Specialties, Faculty of Health Sciences, University of Lomé, Lomé, Togo

²Faculty of Medicine and Pharmaceutical Sciences, University of Dschang, Lomé, Cameroon

³Rheumatology Department, Regional Hospital Center Lomé Commune, Lomé, Togo

⁴Research Team in Medical Imaging and Medical Applications of Nuclear Sciences and Technologies, University of Kara, Kara, Togo

⁵Department of Medicine and Specialties, Faculty of Health Sciences, University of Kara, Kara, Togo

Email: *efianyo@gmail.com

How to cite this paper: Fianyo, E., Lekpa, F.K., Apetse, K., Limazié, Y.M., Tchaou, M. and Oniankitan, O. (2026) Patterns of Low Back Pain at Diagnosis in a Community Hospital in Lomé, Togo. *Open Journal of Rheumatology and Autoimmune Diseases*, 16, 25-35.

<https://doi.org/10.4236/ojra.2026.161003>

Received: November 19, 2025

Accepted: January 3, 2026

Published: January 6, 2026

Copyright © 2026 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Background: Recent data on low back pain (LBP) from Togo is scarce. We therefore conducted this study to determine the current epidemiological, clinical, and aetiological characteristics of LBP in rheumatology consultations in Lomé, Togo. **Patients and Method:** We performed a retrospective cross-sectional study on the medical records of patients seen in the rheumatology department at Bè Hospital in Lomé, Togo, from January 2015 to December 2020. Our source population consisted of all files with a coded diagnosis of LBP. Data was collected using a survey form that included socio-demographic and clinical data. The significance threshold was set at a p-value < 0.05. **Results:** Of the 4101 patients admitted during the study period, 1208 (Women, 64.9%) met our criteria for inclusion, representing a hospital frequency of 29.4%. The mean age was 47.8 years. The mean duration of the disease was 14.3 ± 31.4 months. LBP was mechanical in 81.5% of cases, and radiculopathy was present in 75.2% of patients. Radiculopathy was unilateral in 54% of patients, and followed the L5 pathway in 55%. Functional impairment was present in 52% patients. Past history of LBP was found in 45.7% of patients, while 0.6% had a history of lumbar trauma. Degenerative pathology accounted for 99.6% of cases. Nonspecific LBP was prevalent among younger subjects (p < 0.001), whereas nonspecific lumbosacral radiculopathy and lumbar spinal stenosis were prevalent among older subjects (p < 0.001). The aetiologies were not influenced by body mass index. **Conclusion:** LBP remains very common in Togo, affecting mainly active middle-aged women. Degenerative pathology is the dominant aetiology. Further surveys could help identify modifiable risk factors with a

view to preventive action.

Keywords

Low Back Pain, Radiculopathy, Degenerative Disc Diseases, Togo, Sub-Saharan Africa

1. Introduction

Low back pain is defined as pain or discomfort in the area on the posterior aspect of the body from the lower margin of the twelfth rib to the lower gluteal folds with or without pain referred into one or both lower limbs that lasts for at least one day [1]. It is an extremely common symptom [2] and is a major public health issue in developed countries because of its socio-economic cost [3]. The annual prevalence of low back pain in the US adult population is 10% - 30%, and the lifetime prevalence of US adults is 65% - 80% [4]. In 2023, the total direct healthcare costs attributable to low back pain in the United States amounted to \$40 billion, or approximately \$2000 per patient per year [5]. In addition to direct healthcare costs, low back pain also generates significant opportunity costs. The Global Burden of Disease study identified low back pain as the main cause of disability and lost working days [6]. In Togo, the average financial cost of low back pain was four times the Guaranteed Interprofessional Minimum Wage, as shown in a hospital study carried out in Lomé in 2017 [7]. Recent data from Cameroon has also shown that the disability appears to be comparable to data from developed countries [8].

In Africa, very few studies have been carried out in the general population. Hospital studies in Benin and the Ivory Coast have shown that pathology of the lumbar spine is very common, accounting for 36% [9] and 41.6% [10] of rheumatological pathology respectively. The main systematic reviews carried out in Africa show prevalence rates comparable to those estimated worldwide for low back pain. These reviews are characterised by an over-representation of studies carried out in English-speaking countries south of the Sahara, in particular Nigeria and South Africa. Of the 65 studies included in this review, only three were published in French-speaking countries (Burkina Faso, Senegal and Togo) [11] [12]. In Togo, Mijiyawa *et al.*, in a hospital study conducted in 2000, showed that low back pain was the main reason for rheumatological consultations (35.3% of consultations). It affected people of both sexes in the prime of their lives. Degenerative disease was the most common clinical form (95.3%) [13].

Since this previous study was carried out 25 years ago, no data were available to determine whether the epidemiology of low back pain had changed in Togo. The aim of our study was therefore to examine the current epidemiological, clinical and aetiological characteristics of low back pain in rheumatology consultations in Lomé (Togo).

2. Patients and Method

2.1. Setting and Type of the Study

Our study took place in the Rheumatology Department of Bè Hospital, a level two hospital in the Togolese health pyramid, located in Lomé. It was a cross-sectional study with retrospective collection of medical records.

2.2. Study Period

The study ran from 1 January 2015 to 31 December 2020.

2.3. Inclusion and Exclusion Criteria

All patients aged 18 and over seen in consultation during the study period for low back pain with no other associated spinal or peripheral joint disorders and who had undergone at least one imaging examination were included. Files that could not be used were excluded.

2.4. Data Collection

The data was collected using a survey form containing socio-demographic data (age, sex, profession, marital status), clinical data (pain characteristics, medical history, physical signs), paraclinical data (imaging, biology, histology) and aetiological aspects.

2.5. Operational Definitions

Common low back pain: Low back pain is considered common (or non-specific) in the absence of warning signs (red flags), which must be systematically sought out and which may lead the doctor to suspect a serious extra-spinal pathology or an urgent spinal pathology (infection, tumour, chronic inflammatory rheumatism, etc.). “False low back pain”, *i.e.*, referred pain of visceral origin, must also be ruled out. Common low back pain is initially considered to be mechanical in origin, with degenerative damage to the discs and posterior interapophyseal joints, static disorders (spondylolisthesis, scoliosis, etc.) or no major abnormalities found in the assessment, particularly in imaging.

Housewife: a non-working woman who is responsible for running the household.

Artisan: a person who practises a mechanical or manual craft, following the rules of an established art.

Worker: a person who, in return for payment, carries out work, usually manual, for an employer in the building, industrial or agricultural sectors.

Office worker: an employee working in an office, without any command or decision-making function, to carry out tasks of an administrative nature.

2.6. Data Processing and Analysis

The data was entered using Epidata 3.1 software. The database was analysed using

Microsoft Excel 2019 and R 4.0.4 in the RStudio 1.4 environment. Quantitative variables were described as means \pm standard deviation. Qualitative variables were described in terms of numbers and percentages, and compared using chi2 or Fisher tests. The significance threshold was set at a p-value strictly less than 0.05.

2.7. Ethical and Administrative Aspects

This study received ethical approval from the Ethics Committee of the Hôpital de Bè. Patient consent was not obtained due to the retrospective nature of the recruitment. Patient confidentiality was maintained and the study complied with the World Medical Association's Declaration of Helsinki.

3. Results

A total of 4101 patients were seen during the study period. Low back pain was diagnosed in 1556 patients. Only 1208 patients met our inclusion criteria. This gave us a hospital prevalence of low back pain of 29.4%.

3.1. Epidemiological Data

The mean age of the patients was 47.8 ± 13.9 years (extremes 18 and 88 years). Females predominated, with an M/F sex ratio of 0.54. The most common occupations were shopkeepers (37.6%), craftsmen (13.4%) and manual workers (7.3%) (**Table 1**).

Table 1. Distribution of patients by socio-demographic data.

| | Numbers | Percentage |
|-------------------|---------|------------|
| Female sex | 784 | 64.9 |
| Married | 845 | 69.9 |
| Single | 210 | 17.4 |
| Widowers | 119 | 9.9 |
| Divorced | 34 | 2.8 |
| Retailers | 454 | 37.6 |
| Craftsmen | 162 | 13.4 |
| Workers | 88 | 7.3 |
| Housewives | 82 | 6.8 |
| Office workers | 78 | 6.5 |
| Teachers | 54 | 4.5 |
| Carers | 46 | 3.8 |
| Pupil/student | 44 | 3.6 |
| Cultivators | 43 | 3.6 |
| Machine operators | 38 | 3.1 |

3.2. Clinical Data

The mean duration of low back pain was 14.3 ± 31.6 months (extremes three days and 420 months). Low back pain was mechanical in 985 patients (81.5%), inflammatory in 206 (17.1%) and mixed in 17 (1.4%). It was impulsive in 430 patients (35.6%). Radiculalgia was present in 908 patients (75.2%). It was unilateral in 490 patients (54%), L5 in 508 patients (55.9%) and S1 in 160 patients (17.6%). Low back pain evolved in a sawtooth pattern in 984 patients (81.5%). The exacerbation factors were prolonged standing and/or walking (50.6%), carrying heavy loads (15.3%) and changes in position (11.5%). Functional impairment was present in 628 patients (52.0%). In 37.3% of cases, this was a limitation in walking perimeter, in 30.9% a reduction in activities of daily living, and in 1.9% functional impotence. The most common comorbidities were arterial hypertension (70%), overweight and obesity (63.6%), and diabetes (14.1%). Five hundred and fifty-two patients (45.7%) had a history of low back pain, and eight patients (0.6%) had a history of low back trauma.

Eight patients (0.7%) had a fever. Weight loss was present in 169 patients (14%).

The spinal syndrome consisted of pain on palpation of the spinous processes in 890 patients (73.7%), stiffness in 878 patients (72.7%), static problems in 212 patients (17.5%), and an analgesic attitude in 199 patients (16.5%). Twelve patients (1%) had a gibbosity.

Neurologically, 561 patients (46.4%) had a Lasègue sign, 350 (28.9%) a bell sign and 73 (6%) a Léri sign. Motor deficits were noted in 37 patients (3.9%), including three cases of paralyzing lomboradiculalgia and two cases of cauda equina syndrome.

3.3. Paraclinical Data

All patients had a standard X-ray. An abnormality was found in 1107 patients (91.6%). Degenerative disc disease was noted in 97.4% of cases. Five patients (0.5%) had vertebral compression, including two of traumatic origin, two of undetermined origin and one of tumour origin (**Table 2**). Twenty-five patients (2.1%) had undergone a CT scan and five patients (0.4%) a magnetic resonance imaging (MRI) scan.

Table 2. Distribution of patients according to the results of standard lumbar spine radiography.

| | Numbers | Percentage |
|-------------------------------|---------|------------|
| Degenerative disc disease | 1078 | 97.4 |
| Spondylolisthesis | 60 | 5.4 |
| Transitional anomaly | 17 | 1.5 |
| Fractured vertebrae | 5 | 0.5 |
| Spondylodiscitis | 3 | 0.3 |
| Diffuse bone demineralisation | 2 | 0.3 |
| Ivory vertebra | 1 | 0.1 |

3.4. Etiology

Degenerative pathology was the most common, accounting for 99.6% of cases, followed by infectious pathology (0.2%) and tumour pathology (0.1%) (Table 3). There was a statistically significant relationship between age and diagnosis: common low back pain was observed in younger subjects, and common lumbar radiculalgia and narrowed lumbar canal in older subjects ($p < 0.000$). The aetiologies were not influenced by body mass index, particularly obesity.

Table 3. Distribution of patients according to the diagnosis.

| | Numbers | Percentage |
|--------------------------------------|---------|------------|
| Types of Pathologies (1208) | | |
| Degenerative pathology | 1204 | 99.6 |
| Infectious pathology | 2 | 0.2 |
| Tumour pathology | 1 | 0.1 |
| Inflammatory pathology | 1 | 0.1 |
| Degenerative Pathology (1204) | | |
| Common lumbar radiculalgia | 898 | 74.3 |
| Common low back pain | 276 | 22.8 |
| Narrowed lumbar canal | 30 | 2.5 |
| Infectious Pathology (2) | | |
| Tuberculous spondylodiscitis | 2 | 100 |
| Tumour Pathology (1) | | |
| Bone metastases | 1 | 100 |
| Inflammatory Pathology (1) | | |
| Ankylosing spondylitis | 1 | 100 |

4. Discussion

4.1. Main Results

This five-year retrospective cross-sectional study aimed to determine the epidemiological, clinical and paraclinical characteristics of low back pain in Togo. The hospital incidence of low back pain was 29.4%. The mean age of patients was 47.8 ± 15 years. Women accounted for 64.9% (sex ratio M/F: 0.54). The mean duration of the disease was 14.3 ± 31.4 months. Low back pain was mechanical in 81.5% of cases, and radiated to the lower limbs in 75.2% of patients. Radiation was unilateral in 54% of patients, and followed the L5 pathway in 55%. Degenerative pathology accounted for 99.6% of cases. Clinical form (common low back pain, common lumbar radiculalgia, narrowed lumbar canal) was influenced by age ($p \leq 0.000$) but not by body mass index.

4.2. Limits

If these results are to be interpreted rigorously, the shortcomings associated with

recruitment bias must be taken into account. The cross-sectional nature of the study meant that it was not possible to describe or assess the risk factors for low back pain previously described in African populations, such as personal or family history of low back pain, smoking, alcoholism, manual work, long walks, psychological factors and marital status [11]. In addition, this was a single-centre hospital study which only included patients attending the rheumatology department. The inclusion criterion requiring at least one imaging exam may introduce selection bias by potentially over-representing patients with more severe or persistent symptoms. However, this study shows that low back pain is not confined to university hospitals, as in the previous study carried out in Togo, but appears to be common in all health facilities, which would indicate that it is ubiquitous. The retrospective nature of the recruitment, with numerous selection biases and missing data, adds to the previous limitation, making it impossible to generalise our results. The low standard of living of the population (guaranteed minimum wage = USD 62.17 at the time of the study) explains the difficulty of carrying out the CT and MRI scans recommended in certain diagnostic algorithms. Imaging consisted essentially of standard radiography. These limitations do not alter the epidemiological interest of our work.

4.3. Epidemiological Data

The first large-scale study on low back pain in Togo was conducted in a level one university hospital [13]. The hospital frequency of low back pain was 35.3%. Mean age at onset was 42 years, and mean duration of low back pain was three years. Females were represented 57.7%. Degenerative spinal disease was 95.3%. The present study, conducted in a level two hospital, shows that a quarter of a century later, low back pain remains a public health problem. Indeed, it affects three out of ten patients consulting a rheumatologist. High hospitalisation rates have also been found in Ivory Coast (41.6%) [10], and a point prevalence of between 32% and 39% has been found in systematic reviews conducted in Africa [11] [12]. Low back pain is therefore a real health problem among non-communicable diseases in Africa. Disseminating these results will help guide policy makers in implementing specific measures. Preventive and curative measures for the management of people with low back pain should be introduced. This would involve training healthcare professionals in the management of low back pain and its specificities, as well as training more rheumatologists.

The average age of patients in our study was 47.8 years, with extremes of 18 and 88 years. This makes low back pain a problem for active individuals in their prime. However, young adults are not spared. Vujcic *et al.* [14], in a study of Serbian medical students, found a prevalence of 59.5% over the previous twelve months, with an average age of 22.5 years.

In our study, there was a clear predominance of women (64.9%). This predominance was found by Doualla *et al.* in Cameroon (70.1%) [15], and in Ivory Coast by Traoré *et al.* (63.8%) [10]. This female predominance of low back pain is also

found in the literature [16]. In our context, it could be explained by the arduous nature of domestic work, which very often puts strain on the back and is usually performed by women. Other explanatory factors could be hormonal (menstruation, menopause) and psychosocial (women are more likely to report pain, whereas African men tend to under-report their health problems because they perceive them as an attack on their masculinity) [17].

4.4. Clinical Data

The mean duration of evolution was 14.3 months. This result is similar to that observed by Kakpovi *et al.* in 2017, who found an average duration of 10.3 months [18]. This long waiting time before consultation could be explained on the one hand by the low income of the population and the absence of effective universal health cover, the trivialisation of symptoms, self-medication and the intervention, in our context, of several actors, notably traditional healers and the religious community, before the specialist's opinion. The low number of rheumatologists in Lomé and the lack of knowledge on this specialty among carers and patients could also play a role.

Obesity is recognised as a risk factor for common low back pain. This could be explained by mechanical overload, low-grade systemic inflammation and reduced physical activity [19]. Our study did not find this link, nor did other authors [20] [21]. These discrepancies qualify the link between low back pain and obesity. Obesity may be a predisposing factor, but other variables (genetics, posture, lifestyle) may also play a role. Differences in study design must also be taken into account.

Low back pain was mechanical in 81.5% of cases, and radiated to the lower limbs in three-quarters of cases. Radiation followed the L5 path in 55.9% of cases. This data is similar to that of Diomandé *et al.* in the Ivory Coast [22] and Doualla-Bija in Cameroon [23]. The predominance of L5 sciatica is explained by the frequent location of disc herniations at the L4-L5 and L5-S1 intervertebral discs, and by the particular anatomy of the spinal canal and foramen at this level [24]. In our study, functional impairment affected more than half of the patients at the time of diagnosis. It was rarely due to a neurological deficit, which would justify the delay in diagnosis. Sensory impairment was predominant.

4.5. Etiologies

In terms of aetiology, degenerative pathology accounted for 99.6% of cases. This result is consistent with that of Mijiyawa *et al.* in 2000 [13] in Togo, who found 95.3%. Amongst the mechanical causes, disc degeneration dominated (97.4%). This predominance has also been described by Bogduck [25] with a frequency of between 40% and 50%, from the age of 40. Pathologies of the posterior arch ranked second, with spondylolisthesis (5.4%). Tagbor *et al.*, in a study in Lomé, found that spondylolisthesis affected women in preference (88.1%), and manifested itself as lumboradiculalgia in 92.4% of cases [26].

Symptomatic low back pain in our study appeared to be exceptional (0.4%),

although cross-sectional imaging was rarely performed. This result is lower than those of Mijiyawa *et al.* in Togo, Traoré *et al.* in the Ivory Coast and Zomalheto *et al.* in Benin, who found 3.8% [13], 9.32% [10] and 32.3% [9] respectively. These different studies were carried out in University Hospitals, where patients are usually in a more serious condition.

Modifiable risk factors are poor back hygiene, bad posture, and manual labor.

5. Conclusion

The epidemiology, clinical features and causes of low back pain have not changed in 25 years. Low back pain is still very common, affecting mainly active middle-aged women. Degenerative pathology is the dominant aetiology. Field surveys could help identify modifiable risk factors with a view to preventive action.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Haute Autorité de Santé (France) (2019) Fiche mémo prise en charge du patient présentant une lombalgie commune. https://www.has-sante.fr/upload/docs/application/pdf/2019-04/fm_lombalgie_v2_2.pdf
- [2] Hartvigsen, J., Hancock, M.J., Kongsted, A., Louw, Q., Ferreira, M.L., Genevay, S., *et al.* (2018) What Low Back Pain Is and Why We Need to Pay Attention. *The Lancet*, **391**, 2356-2367. [https://doi.org/10.1016/s0140-6736\(18\)30480-x](https://doi.org/10.1016/s0140-6736(18)30480-x)
- [3] Koes, B.W., van Tulder, M.W. and Thomas, S. (2006) Diagnosis and Treatment of Low Back Pain. *BMJ*, **332**, 1430-1434. <https://doi.org/10.1136/bmj.332.7555.1430>
- [4] Urits, I., Burshtein, A., Sharma, M., Testa, L., Gold, P.A., Orhurhu, V., *et al.* (2019) Low Back Pain, a Comprehensive Review: Pathophysiology, Diagnosis, and Treatment. *Current Pain and Headache Reports*, **23**, Article No. 23. <https://doi.org/10.1007/s11916-019-0757-1>
- [5] Chang, D., Lui, A., Matsuyan, A., Safaee, M.M., Aryan, H. and Ames, C. (2024) Comparative Review of the Socioeconomic Burden of Lower Back Pain in the United States and Globally. *Neurospine*, **21**, 487-501. <https://doi.org/10.14245/ns.2448372.186>
- [6] Hoy, D., March, L., Brooks, P., Blyth, F., Woolf, A., Bain, C., *et al.* (2014) The Global Burden of Low Back Pain: Estimates from the Global Burden of Disease 2010 Study. *Annals of the Rheumatic Diseases*, **73**, 968-974. <https://doi.org/10.1136/annrheumdis-2013-204428>
- [7] Fianyo, E., Oniankitan, O., Tagbor, K., Kakpovi, K., Houzou, P., Koffi-Tessio, V.E., *et al.* (2017) Coût de la lombalgie et de la lomboradiculalgie communes en consultation rhumatologique à Lomé. *La Tunisie Médicale*, **95**, 168-171.
- [8] Doualla, M., Aminde, J., Aminde, L.N., Lekpa, F.K., Kwedi, F.M., Yenshu, E.V., *et al.* (2019) Factors Influencing Disability in Patients with Chronic Low Back Pain Attending a Tertiary Hospital in Sub-Saharan Africa. *BMC Musculoskeletal Disorders*, **20**, Article No. 25. <https://doi.org/10.1186/s12891-019-2403-9>
- [9] Zomalheto, Z., Gounongbé, M. and Avimadjè, M. (2012) Fréquence hospitalière et

- étiologies des lombalgies à Cotonou. *Revue Internationale des Sciences Médicales*, **14**, 213-216.
- [10] Traore, A.D., Kouakou, E.C., Yao, K.J.-C., Kouame, K.G., Aboubakar, B., Enock, K. et al. (2022) Lombalgies et/ou lomboradiculalgies: Profil épidémio-clinique et étiologies à Bouake (Côte d'Ivoire). *Revue Marocaine de Rhumatologie*, **59**, 44-48.
- [11] Louw, Q.A., Morris, L.D. and Grimmer-Somers, K. (2007) The Prevalence of Low Back Pain in Africa: A Systematic Review. *BMC Musculoskeletal Disorders*, **8**, Article No. 105. <https://doi.org/10.1186/1471-2474-8-105>
- [12] Morris, L.D., Daniels, K.J., Ganguli, B. and Louw, Q.A. (2018) An Update on the Prevalence of Low Back Pain in Africa: A Systematic Review and Meta-Analyses. *BMC Musculoskeletal Disorders*, **19**, Article No. 196. <https://doi.org/10.1186/s12891-018-2075-x>
- [13] Mijiyawa, M., Oniankitan, O., Kolani, B. and Koriko, T. (2000) La lombalgie en consultation hospitalière à Lomé (Togo). *Revue du Rhumatisme*, **67**, 914-920. [https://doi.org/10.1016/s1169-8330\(00\)00033-8](https://doi.org/10.1016/s1169-8330(00)00033-8)
- [14] Vujcic, I., Stojilovic, N., Dubljanin, E., Ladjevic, N., Ladjevic, I. and Sipetic-Grujicic, S. (2018) Low Back Pain among Medical Students in Belgrade (Serbia): A Cross-Sectional Study. *Pain Research and Management*, **2018**, Article ID: 8317906. <https://doi.org/10.1155/2018/8317906>
- [15] Doualla, M.S., Luma, N.H., Yone, E.P., Balkissou, A.D., Tchaleu, N.B., Motah, M., et al. (2013) Présentation clinique et radiologique de la lombalgie chronique en consultation hospitalière à Douala-Cameroun. *Journal Africain d'Imagerie Médicale*, **2**, 83-88.
- [16] GBD 2019 Diseases and Injuries Collaborators (2020) Global Burden of 369 Diseases and Injuries in 204 Countries and Territories, 1990-2019: A Systematic Analysis for the Global Burden of Disease Study 2019. *The Lancet*, **396**, 1204-1222.
- [17] Wang, Y.X.J. (2017) Menopause as a Potential Cause for Higher Prevalence of Low Back Pain in Women than in Age-Matched Men. *Journal of Orthopaedic Translation*, **8**, 1-4. <https://doi.org/10.1016/j.jot.2016.05.012>
- [18] Kodjo, K., Eyram, F., Prenam, H., Elias, S., Sika, K.V.E., Cyrille, T.K., et al. (2017) Lomboradiculalgie du Sujet Âgé en Consultation Rhumatologique À Lomé, Togo. *European Scientific Journal, ESJ*, **13**, 222-229. <https://doi.org/10.19044/esj.2017.v13n30p222>
- [19] Zang, T.-T., Liu, Z., Liu, Y.-L., Zhao, J.-J., Liu, D.-W. and Tian, Q.-B. (2018) Obesity as a Risk Factor for Low Back Pain: A Meta-Analysis. *Clinical Spine Surgery: A Spine Publication*, **31**, 22-27. <https://doi.org/10.1097/bsd.0000000000000468>
- [20] Shim, J.-G., Ryu, K.-H., Cho, E., Ahn, J.H., Park, J., Lee, H., et al. (2023) Association between Body Composition and Chronic Low Back Pain in Korean Adults Aged over 50 Years: The Korea National Health and Nutrition Examination Survey (KNHANES) 2010-2011. *Medical Principles and Practice*, **32**, 281-287. <https://doi.org/10.1159/000533354>
- [21] Dario, A.B., Ferreira, M.L., Refshauge, K.M., Lima, T.S., Ordoñana, J.R. and Ferreira, P.H. (2015) The Relationship between Obesity, Low Back Pain, and Lumbar Disc Degeneration When Genetics and the Environment Are Considered: A Systematic Review of Twin Studies. *The Spine Journal*, **15**, 1106-1117. <https://doi.org/10.1016/j.spinee.2015.02.001>
- [22] Diomandé, M., Ouattara, B., Eti, E., Gbane-Kone, M., Ahoty, F.A.D., Djaha, K.J.M., et al. (2013) La hernie discale lombaire au CHU de Cocody (Abidjan); Aspects épidémiologiques, clinique, radiologique et thérapeutique. *Revue Africaine et Malgache de*

Recherche Scientifique/Sciences de la Santé, **1**, 17-19.

- [23] Doualla-Bija, M., Takang, M.A., Mankaa, E., Moutchia, J., Ongolo-Zogo, P. and Luma-Namme, H. (2017) Characteristics and Determinants of Clinical Symptoms in Radiographic Lumbar Spinal Stenosis in a Tertiary Health Care Centre in Sub-Saharan Africa. *BMC Musculoskeletal Disorders*, **18**, Article No. 494. <https://doi.org/10.1186/s12891-017-1844-2>
- [24] Dydyk, A.M., Khan, M.Z. and Singh, P. (2025) Radicular Back Pain. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK546593/?utm_source=chatgpt.com
- [25] Bogduk, N. (2004) Management of Chronic Low Back Pain. *Medical Journal of Australia*, **180**, 79-83. <https://doi.org/10.5694/j.1326-5377.2004.tb05805.x>
- [26] Tagbor, C.K., Koffi-Tessio, V.E.S., Houzou, P., Fianyo, E., Kakpovi, K., Amegan-Aho, K.H., *et al.* (2022) Lumbar Spondylolisthesis in Rheumatological Practice in Lome (Togo): Frequency and Semiological Profile. *Open Journal of Rheumatology and Autoimmune Diseases*, **12**, 21-28. <https://doi.org/10.4236/ojra.2022.121003>