Research Article

Low back pain among patients attending rheumatology clinic in the South West Nigeria

Oguntona SA[1], Adelowo OO[2], Edunjobi SA[3]

[1,3]Rheumatology Unit, Department of Medicine, Olabisi Onabanjo University Teaching Hospital, Sagamu, Ogun State, Nigeria
[3]Rheumatology Unit, Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria

Corresponding author:
Dr. SA Oguntona, P.O. Box 231, Sagamu, Ogun State, Nigeria.
Email: oguntonasa@yahoo.com

Abstract

Background: Back pain is among the common musculoskeletal complaints for patients seeking medical care. Back pain encompasses a spectrum of conditions, those with acute and short duration, to life-long disorders. Generally, causes of back pain include osteoarthritis (spondylosis), disc degeneration, osteoporotic fracture, and non-specific low back pain.
Objective: To determine the pattern of low back pain among the people living in the South West Nigeria.
Design: Prospective study.
Methods: All the patients that presented with low back pain either with or without neuro-vascular complaints were enlisted in the study. The study was carried out over three years (January 2010-December 2012). Inclusion criterion was non-traumatic back pain. Exclusion criteria included traumatic back pain, malignancy related back pain, and inflammatory back pain.
Results: Seventy three patients were seen over three years constituting 21.7% of total rheumatology cases seen over this period. There were 45 (61.6%) males, and 26 (38.4%) females with a male: female ratio of 1.6:1. Age range was 18 to 72 years, with means of 28 years. Males were generally affected with back pain more than females. Males in their active years were more affected. Non-specific back pain was the leading cause of back pain among the patients studied.
Conclusion: The finding of non-specific low back pain as the leading cause of low back pain in this study agrees with earlier literatures on the same issue.

Keywords: Low back pain, Musculoskeletal complaint, Hospital patients, Nigeria

Introduction

Low back pain is usually defined as pain, muscle spasm, or stiffness localized below the costal margin and above the inferior gluteal folds, with or without leg pain (Sciatica)[1]. It is typically classified as being specific or non-specific[2]. Approximately 90% cases of back pain have no identifiable cause and are designated as non-specific. The probability that a particular case of back pain has a specific cause identified on back radiograph is less than 1%[3]. Presently, there is no reliable and valid classification system for low back pain. Acute and sub-acute pain episodes which may last up to three months are the most common presentations of low back pain[4]. Recurrent bouts of such episodes are the norm. Chronic back pain on the other hand is more disabling because of the physical impediments it causes and its psychological effects[5]. Low back pain is associated with multiple risk factors, including gender, age, lifestyle, psychosocial profile, and physical demand of the workplace[6].

Aside pain medications, interventions based on behavioral and cognitive principles, and exercise programmes are effective in improving disability of chronic back pain[7]. Prognosis of back pain is influenced by drug therapies, patient educational materials, and sleeping materials[8].

The aims of this study were to determine the frequency of occurrence of low back pain as related to age and sex, and the common aetiological causes of low back pain among patients attending rheumatology clinic.

Materials and Methods

The studied groups of people were the patients who attended a private rheumatology clinic in the South West of Nigeria with history of low back pain. Inclusion criteria included non-traumatic low back pain and absence of malignancy. Excluded from the study were patients with traumatic back pain, patients with satellite malignancy, and

people with inflammatory back pain. All patients who met the inclusion criteria were enlisted in the study. Their personal data were obtained and documented.

Plain lumbosacral X-ray with postero-anterior, and lateral view were requested in all the patients and interpreted by a radiologist. Computerized tomography, and magnetic resonant imaging were requested in patients with neuro-vascular presentations where patients were able to afford it. Bone densitometry however was not requested for in any of the patients because of non-availability locally. Haematology investigations request were made to rule out other causes of back pain.

Results

Seventy three cases of low back pain were seen over three years (January 2010- December 2012). This represented 21.7% of all rheumatology cases seen over this period. Males constituted 45 (61.6%) of all cases of low back pain and females made up of 28 (38.4%) with a male: female ratio of 1.6:1. Age range of patients seen was 18 to 72 years with mean age of 28 years. People below 30 years made up of 45 (61.6%) of the total patients with low back pain. Patients with features of lumbar spondylosis were 25 (34.2%), with 14 (56%) males and 11(44%) females. There were 6 (8.2%) cases of disc herniation and 4 (5.5%) cases of spondylolisthesis (Table 1).

Table 1: Spectrum of rheumatology cases seen over 3 years (July 2009- June 2012)

Serial No.	Condition	No.	Male	(%)	Female	(%)
1.	Osteoarthritis	104	32	30.8	72	69.2
2.	Rheumatoid arthritis	12	4	33.3	8	66.7
3.	Cervical spondylosis	36	23	63.9	13	36.1
4.	Low back pain					
	Lumbar spondylosis	25	14	56	11	44
	Disc herniation	6	2	33.3	4	66.7
	Spondylolisthesis	4	3	75	1	25
	Non-specific low back pain	38	26	68.4	12	31.6
5.	Gout	28	22	78.6	6	21.4
6.	SLE	6	1	16.7	5	83.3
7.	Shoulder pain syndrome	12	4	33.3	8	66.7
8.	Hypermobility syndrome	8	0	0	8	100
9.	Fibromyagia	6	0	0	6	100
10.	Polymyalgia rheumatica	2	0	0	2	100
11.	Bursitis	4	3	75	1	25
12.	Trigger finger	16	6	37.5	10	62.5
13.	Sjorgren's syndrome	1	0	0	1	100
14.	Reiter's syndrome	1	1	100	0	0
15.	Septic arthritis	2	0	0	2	100
16.	Lateral epicondylitis	2	2	100	0	0
17.	Medial epicondylitis	2	2	100	0	0
18.	Scleroderma	2	0	0	2	100
19.	Psoriatic arthropathy	1	1	100	0	0
20.	Plantar fasciitis	7	2	28.6	5	71.4
21.	Carpal tunnel syndrome	3	1	33.3	2	66.7
22.	Archilis tendinitis	8	1	12.5	7	87.5
	Total	336	160		176	

Table 2: Demographic characteristic of low back pain patients (n = 73)

Male	45 (61.6%)
Female	28 (38.4%)
Age range	18-72
Mean age	28 years

Table 3: Disorders causing low back pain in the studied patients

Disorder	Male	Female	Total	(%)
Lumbar spondylosis	14	11	25	34.2
Disc herniation	4	2	6	8.2
Spondylolisthesis	3	1	4	5.5
Non-specific back pain	26	12	38	52.1
Total	47	26	73	100

Non-specific low back pain constituted the bulk of the cases seen, representing 52.1% of total cases of low back pain. There were 26 (68.4%) males and 12 (31.6%) females in the non-specific back pain group as shown in Table 3. Table 2 shows demographic characteristic of 73 low back pain patients. It was however difficult to determine how many patients progressed to chronicity because of loss to follow-up.

Discussion

Low Back Pain (LBP) is the most prevalent musculoskeletal condition and the highest cause of disability. The mean age of onset of low back pain in this studied group was 28 years which is a little lower than findings in most literatures. The difference may possibly be adduced to the manual labour engaged in by most of our patients. Cross-sectional data demonstrated that initial onset of lower back pain is expected to occur around the mean age of 30 years[9], and peaking in occurrence between the ages of 45 and 60 years[10,11].

However, low back pain is common in both older and younger adults. Nyland and Grimmer in 2003[12] stated that an early emergence of lower back pain and the increase duration of suffering may go so far as to decrease performance of duties in any physically active vocation.

Low back pain is a very frequent occurring condition among the general population. Among adults, 70-85% was believed to experience at least one episode of low back pain at some time during their lives[13]. Anecdotally, there is a general believe that low back pain complaint is commoner in Caucasians than Africans possibly because of compensation claims by the western world[14].

Men were more affected than women in this study. some authors were of the opinion that this is most likely due to hard labour engaged in by men in our society and also possibly related to prolonged sitting associated with driving. Recent studies have reported contradictory results on sex and back pain. In her review of the literature, Riihimäcki[15] did not report sex as a risk factor for low back pain. Also in the review by Burdorf and Sorock[16], sex did not seem to be linked with low back pain. In the study of Park *et al*[17], low back pain occurred more often among women except for low back pain caused by occupational injuries or occupational repetitive activities.

Non-specific low back pain was the commonest cause of back pain in this study. This finding however corresponded with most literatures. This is the most common type of back pain. About 19 in 20 cases of acute (sudden onset) low back pain are classed as non-specific. This is the type of back pain that most people will have at some point in their life. It is called non-specific because it is usually not clear what is actually causing the pain. In other words, there is no specific problem or disease that can be identified as to the cause of the pain[18].

Low back pain is an integral part of most human lives and causes different degree of suffering and disability. The natural history of back pain seems in general to be favourable, but long-term or permanent disability should also be kept in view. Studies have found that the presence and severity of low back pain is associated with several socio-demographic factors; among them are sex, age, educational level, smoking and occupation[19,20]. One study of young adolescents and young adults aged 12-22 years demonstrated an overall prevalence of low back pain of 7%[21] (pain greater than 30 days during the past year).

It was difficult to do a long term follow up of our patients because of high rate of loss to follow up, either because they were symptomatically better or sought alternative source of treatment. Because of the drop-out, it was difficult to determine what percentage of people who presented with acute pain progressed to chronic low back pain. However, a recent review to investigate the long-term course of incidence and prevalence cases of low back pain showed that the reported proportion of patients who still experience pain after 12 months was 62% (range 42-75%)[22]. Prospective studies demonstrated that low back pain do not display a six-week spontaneous recovery pattern, as was once believed[23]. The condition is regularly seen to worsen over time, becoming a chronic disorder, influenced by both physical and psychosocial factors[24,25].

Data from general practice has also shown that a considerable proportion with low back pain continue to experience both symptoms and varying degree of disability at 4 years, although they were not necessarily seeking care at that point[26]. A recently published systematic review of prospective cohort studies found that psychological factors are associated with increased risk of chronic low back pain, and also predict long-term work absence in disabling low back pain[27,28].

Low back pain can interfere with activities ranging from the basic activities of daily living to many work-related functions. In patients with acute and sub-acute low back pain, there may be unnoticeable changes in disability on quality of life[29]. In chronic low back pain however, psychological distress in the form of depressive symptoms do set in and this affects the quality of life of the individual[29].

Low back pain cut across all occupations in the studied group. Students, artisans, civil servants, farmers, and traders were all affected. Of note however in this study, was the high rate of non-specific low back pain in people below 30 years. Men constituted the greater proportion of this group 26 (68.4%). This is not however surprising, because this group represent the sexually active group, which the authors believe could have contributed to the high number.

The short coming of this study was that only hospital based patients were considered, because there are so many other people in the community with history of low back pain who visit other sources of medical care, such as traditional healers, pharmacy shops and general practitioners.

Conclusion

The frequency of back pain obtained in this specialist setting cannot be a true representation of the community. The frequency of low back pain obtained cannot therefore be generalized. Therefore, further research in the community will be necessary to determine the true frequency of low back pain in our community.

Acknowledgements

The authors wish to acknowledge the matron of the clinic, Mrs Tijani Tawakalitu, and other staff who made the data collection possible. Authors acknowledge the great help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

References

1. Dionne CE, Dunn KM, Croft PR, *et al*. A consensus approach toward the standardization of back pain definitions for use in prevalence studies. *Spine*. 2008; **33**(1):95–103.
2. Mulimba J. The problems of low back pain in Africa. *East Afr Med J.* 1990; **67**:250-253.
3. van den Bosch MA, Hollingworth W, Kinmonth AL, *et al*. Evidence against the use of lumbar spine radiography for low back pain. *Clin Radiol.* 2004; **59**:69-76.
4. Ehrlich GE. Low back pain. *Bull World Health Organ.* 2003; **81**:671-676.
5. Katz R. Impairment and disability rating in low back pain. *Clin Occup Environ Med*. 2006; **5**(3):719-740.
6. Omokhodion F, Sanya A. Risk factors for low back pain among office workers in Ibadan, Southwest Nigeria. *Occup. Med.* 2003; **53**:287-289.
7. Liddle SD, Baxter GD, Gracey JH. Exercise and chronic low back pain: what works? *Pain.* 2004; **107**:176-190.
8. Jacob T, Baras M, Zeev A, *et al*. A longitudinal, community-based study of low back pain outcomes. *Spine*. 2004; **29**:1810-1817.
9. Walker B. The prevalence of low back pain: A systematic review of the literature from 1966 to 1998. *J Spinal Disorders.* 2000; **13**(3):205-217.
10. Rossignol M, Rozenberg S, Leclerc A. Epidemiology of low back pain: what's new? *Joint Bone Spine*. 2009; **76**:608–613.
11. Gilgil E, Kaçar C, Butun B, *et al*. Prevalence of low back pain in a developing urban setting. *Spine. 2005;* **30**:1093-1098.
12. Nyland LJ, Grimmer KA. Is undergraduate physiotherapy study a risk factor for low back pain? A prevalence study of LBP in physiotherapy students. *BMC Musculoskelet Disord.* 2003*;* **4**: 22.
13. Linn E. The epidemiology of low back pain in the rest of the world. A review of surveys in low- and middle-income countries. *Spine.* 1997; **22**:1747-1754.
14. Hashemi L, Webster BS, Clancy EA. Trends in disability duration and cost of workers' compensation low back pain claims (1988-1996). *J Occup Environ Med.* 1998; **40**:1110-1119.
15. Riihimäcki H. Low back pain, its origin and risk indicators. *Scand J Work Environ Health*. 1991; **17**:81–90.

16. Burdorf A, Sorock F. Positive and negative evidence of risk factors for back disorders. *Scand J Work Environ Health*. 1997; **23**:243–256.
17. Park C, Wagener D, Parson V. Back pain among US workers: comparison of worker attributes according to self-reported causes of back pain. *Int J Occup Environ Health.* 1997; **3**:37–44.
18. Balague F, Mannion AF, Pellise F, *et al*. Non-specific low back pain. *Lancet*. 2012; **379**: 482-491.
19. Wallner-Scholtfeldt P, Stewart A. The predisposing factors to low back pain in workers. *South Afr J Physiotherapy.* 2000; **56**(3):33-38.
20. Worku Z. Prevalence of low-back pain in Lesotho mothers. *J Manipulative Physiol Therapeutics.* 2000; **23**(3):147-154.
21. Walker B, Muller R, Grant W. Low back pain in Australian adults. Prevalence and associated disability. *J Manipulative Physiol Therapeutics.* 2004; **27**:238-244.
22. Fabunmi AA, Aba SO, Odunaiya NA. Prevalence of low back pain among peasant farmers in a rural community in South West Nigeria. *Afr J Med Sci.* 2005; **34**(3): 259-262.
23. Croft PR, Macfarlane GJ, Papageorgiou AC, *et al*. Outcome of low back pain in general practice: a prospective study. *BMJ*. 1998; **316**:1356-1359.
24. Koleck M, Mazaux JM, Rascle N, *et al*. Psycho-social factors and coping strategies as predictors of chronic evolution and quality of life in patients with low back pain: a prospective study. *Eur J Pain*. 2006; **10:** 1-11.
25. Thomas E, Silman AJ, Croft PR, *et al*. Predicting who develops chronic low back pain in primary care: a prospective study. *BMJ*. 1999; **318**:1662-1667.
26. Prista A, Balague F, Nordin M. Low back pain in Mozambican adolescents. *Europ Spine J*. 2004; **13**:341-345.
27. Mijiyawa M, Oniankitan O, Kolani B. *et al*. Low back pain in hospital outpatients in Lome (Togo). *Joint Bone Spine*. 2000; **67**:533-538.
28. Omokhodion F, Umar U, Ogunnowo B. Prevalence of low back pain among staff in a rural population hospital in Nigeria. *Occup Med*. 2000; **50**(2):107-110.
29. Kovacs FM, Abraira V, Zamora J, *et al*. Correlation between pain, disability, and quality of life in patients with common low back pain. *Spine*. 2004; **29:** 206 - 210.