ORIGINAL ARTICLE

Backache: Presentation and Diagnosis: A Prospective Study at Allama Iqbal Memorial Teaching Hospital Sialkot

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ABSTRACT

Aim: To study the presentation of backache and its diagnosis in patients reporting in different departments of Allama Iqbal Memorial Teaching hospital, Sialkot.
Study design: Prospective study.
Place & duration of study: Department of General Surgery, Khawaja Muhammad Safdar Medical College, Sialkot from January 2016 to October 2017.
Methods: All new patients serially presenting for the first time in the Outpatients' Department of Allama Iqbal Memorial hospital fulfilling the inclusion criteria were registered. A detailed data was recorded on a proforma of all the patients dealt with in the outpatients' departments of General surgery, orthopedic surgery, neurology, neurosurgery, urology, medicine and psychiatry. A series of investigations were performed on the patients suffering from backache to reach a diagnosis for how to manage such patients. Management record was also maintained to analyze the outcome of the treatment. All the data was obtained from different outpatients' departments of Allama Iqbal Memorial Teaching Hospital, Sialkot. The patients were classed in two groups: GroupI- acute backache patients having acute presentation i.e. less than 12 weeks duration while Group II- chronic backache had the symptoms for more than 12 weeks duration.
Results: A total of 3994 patients from OPDs of Allama Iqbal Memorial Hospital, Sialkot. The patients were classed depending upon the duration of symptoms into Group I- Acute backache and Group II Chronic Backache.; having 773 and 3221 patients respectively. Out of Group I, para-spinal muscular spasm was the most common etiology 502 while new or undiagnosed hypertension was the cause in 53 patients. In Group II, connective tissue disorders and arthralgias in 987 patients, prolapsed intervertebral disc in 42 patients and depressive illness was found in 219 patients. Laboratory investigations to get diagnosis were done repeatedly while radiological investigations including x rays thoracic spine 18 and 591, x rays lumbosacral spine 1390 and 6039, myelography in 0 and 173, computed tomographic scan in 76 and 2115 while MRI in 23 and 856 in the two groups respectively were done.
Keywords: Backache, Lumbago, Prolapse vertebral disc, Fibromyalgia

INTRODUCTION

Lower back supports the upper weight of the body and is responsible for the mobility of different parts of body. Muscles of lower back are helpful in movement of hips when walking, while the nerves supply sensation and power to pelvis, feet and legs. Lower back pain is usually the result of injuries to ligaments, discs and joints and the inflammation is as a result of the counter mechanism by the body. But in cases, this inflammation can be severe and cause more pain. A significant overlap of nerve supply to muscles, discs and ligaments result in multiple sensations to the body[1].

Low back pain is a leading cause of disability[2].It occurs in similar proportions in all cultures, interferes with quality of life and performance at work, and is the one of the most common reason for medical consultations. Few cases of back pain are due to specific causes; most cases are non-specific. Acute back pain is the most common presentation and is usually self-limiting, lasting less than three months regardless of treatment. Chronic back pain is a more difficult problem, which often has strong psychological element: work dissatisfaction, boredom, and a compensation system contribute to it[3].Among the diagnoses offered for chronic pain is

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fibromyalgia, an urban condition that does not differ materially from other instances of widespread chronic pain. Although disc herniation detected on X-ray is often blamed, they rarely are responsible for the pain, and surgery is seldom successful for cure. No single treatment is superior to others; patients prefer manipulative therapy, but studies have not demonstrated that it has any superiority over others[4].

The incidence and prevalence of low back pain are roughly the same the world over, but such pain ranks high as a cause of disability and inability to work, as an interference with the quality of life, and as a reason for medical consultation. In many instances, however, the cause is obscure, and only in a minority of cases does a direct link to some defined organic disease exist[5]. In the vast majority of instances the cause of low back pain is obscure and unclear, and these cases are the focus of concern for health care providers.

People with low back pain approach for medical consultations and drug therapies, but they also use a variety of alternative approaches. Regardless of the treatment, most cases of acute back pain improve. At the time, people in such cases may credit the improvement to the interventions some of which clearly are more popular and even seemingly more effective than others e.g. chiropractic and other manipulative treatments[6].

Risk factors Contrary to popular belief, the erect posture of humans depends on the normal curvatures of the spine and such curvatures are not thus the cause of back pain. Obesity and pregnancy in its later stages, can, however, distort the curvature of the spine and result in back pain. In the case of pregnancy, the pain usually ameliorates once the child is delivered. Some activities – such as jogging and running on cement roads rather than tracks, heavy weightlifting, and prolonged sitting especially in cars, trucks, and poorly designed chairscan provoke back pain. Nevertheless, strong psychological factors do play a role[7].

Chronic back pain Psychological factors are even more important in people with chronic back pain. Dissatisfaction with a work situation, a supervisor, or a dead-end job and boredom contribute greatly to the onset and persistence of back pain. As already mentioned, liberal compensation systems play a role in prolonging such pain not because of malingering. Disc herniation and spinal canal narrowing are so common as to be shown by imaging in most of the population in their later years, and in most cases, such conditions are not responsible for the pain. They often are cited as reasons for surgery, but only rarely are operations successful in alleviating the pain definitively[8].

The low back pain (LBP) is an issue met on daily basis. It is commonly occurring among the masses yet poses serious questions for the physicians. Even the era of modern technology, its real cause almost every time goes unidentifiable thus making it far more serious hurdle. It not only presents social but also economical concerns. LBP is thought to be a lingering issue in about 12% of Pakistani population[9,10].

Many studies on different aspects of low backache has been conducted national and international levels. No study on the subject has been conducted in ourAllamaIqbal teaching hospital affiliated with Khawaja Muhammad Safdar Medical College, Sialkot; so we planned this study to collect the data and analyse it.

PATIENTS AND METHODS

All new patients serially presenting for the first time in the Outpatients' Department of Allama Iqbal Memorial hospital fulfilling the inclusion criteria were registered from January 2016 to October 2017. A detailed data was recorded on a proforma of all the patients dealt with in the field of General surgery, orthopedic surgery, neurology, neurosurgery, urology, medicine and psychiatry. A series of investigations performed on the patients suffering from backache to reach a diagnosis thus adapting methodology of how to manage such patients. Management record was also maintained to analyse the outcome of the treatment from outdoor as well as indoor patients. All the data was obtained from different outpatients' departments of Allama Iqbal Memorial Teaching Hospital, Sialkot. The patients were classed in two groups: Group I- acute backache patients having acute presentation i.e. less than 12 weeks duration while Group II- chronic backache had the symptoms for more than 12 weeks duration.

Inclusion Criteria for LBP was pain with or without radiation in patients of 18–65 years age group. This article does not deal with specific and attributable low back pain that results from trauma, osteoporotic fractures, infections, and other mechanical derangements – such causes can be identified and must be dealt with appropriately.All data of investigations both laboratory and radiological investigations and diagnosis was collected and management plan monitored. For management the patients were labeled to have outpatients medical

treatment, medical treatment and physical therapy, Admission to ward and investigations and Surgical intervention or surgery inclusive of discectomy, laminectomy or excision of space occupying lesions. Minimum of three months of follow up was must for inclusion in the study. Known diabetics and females having definite history of gestational amenorrhoea were excluded; similarly those with posttraumatic amputations and disabilities, major general surgery and any malignancy were excluded.

Data was entered and analysis done by SPSS v 22.

RESULTS

Table I: Demographic statistics and statistics of Group I and Group II

Age	18-65 years (median age 46)		
Gender (m:f)	2540:1454 (1.74 **:** 1)		
	n	**Group I-Acute Backache**	**Group II- Chronic Backache**
Total patients	3994	773(19.35%)	3221(80.64%)
General Surgery OPD	437	85(19.45%)	352(80.54%)
Orthopaedic OPD	2033	543(26.70%)	1460(73.29%)
Neurosurgery OPD	1009	116(11.49%)	893(88.50%)
Medical OPD	58	7(12.06%)	51(87.93%)
Urology OPD	42	9(21.42%)	33(78.57%)
Psychiatry OPD	415	13(3.13%)	402(96.86%)

Table II: Investigations from pathology laboratory and radiological imaging.

	Group I	**Group II**
Laboratory investigations		
Complete Blood Picture	3119	5632
Serum Calcium	1674	2345
RA Factor	433	783
Serum Uric Acid	433	783
ANA	433	783
ASO titres	12	176
C Reactive Protein	-	94
Radiological imaging		
X ray chest and thoracic spine	18	591
X ray Lumbosacral spine	1390	6039
Myelogram	-	173
C T Scan	76	2115
MRI	23	856

Table III: Etiological data

Group I-(773)(100%)		**Group II-(3221)(100%)**	
Muscular spasm/paraspinal muscles	502(%)	Chronic prolapsed intervertebral disc	42(%)
Acute Prolapse of Intervertebral disc(including Cauda equine and anterior spinal syndrome)	61(%)	Ankylosing Spondylitis	369(%)
Spodylolisthesis	6(%)	Osteomalacia	17(%)
Trauma/ ligamentous injuries Fracture of vertebral	88(%)	Senile Osteoporosis	1482(%)
Osteomyellitus	4(%)	Connective Tissue Disorders	987(%)
Meningitis	07(%)	Spinal stenosis	22(%)
Iatrogenic (spinal anaesthesia/ lumbar puncture)	29(%)	Congenital anomalies, Block vertebra Hemivertebra, Scoliosis	64(%)
Pyelonephritis/renal calculi/ perinephric abscess/	8(%)	Primary tumours	19(%)
Undiagnosed hypertension	53(%)	Metastatic cancers	43(%)
Functional/ no diagnosis	15(%)	Depression	219(%)
		Functional/ no diagnosis	20(%)

Table IV: Treatment and outcome of treatment

	Group I (773)(100%)			Group II (3221)(100%)		
	Total	Relieved of the symptoms	Still on follow up	Total	Relieved of the symptoms	Still on follow up
Outdoor medication and investigations	613	580	23	1706	1536	170
Medication and Physical Therapy/ TENS etc	82	73	9	1291	824	467
Admission to ward and investigations	55	42	13	187	92	95
Surgical intervention	23	11	12	37	15	22

As shown in the table most of the patients were treatable as outpatients and the percentage of admissions were quite less.

DISCUSSION

In our study male to female ratio is 1.74:1 as compared to 1:1.18 in a study done by Cougot et al[11]. In research by Freburger et al[12]; age group was 21 years to 65 while in our studies age group is 18 years to 65 years.

In our research there are multiple causative factors for low back pain; muscular spasm, disc prolapse meningitis iatrogenic metasatic tumors osteomyelitis hypertension depression spinal stenosis connective tissue disoders ankylosing spondylitis whereas pain is just a psychological phenomenon as mentioned in studies by Garland[13] .

In a research done by Katz et al[14] it was found that 2 lakh twenty four thousand patients were admitted for the management of lower back pain but in our research 960 patients were admitted for lower back pain.

In our studies obesity, hypertension, jogging, running, weight, lifting, psycologial problms, dissatisfaction with work place ,dead end jobs liberal compensation systems ,herniated disc are risk factors as compare to risk factors like: nociceptive degeneration of lumber disc, TNF, NGF, awkward sitting postures, obesity, smoking, genetic factors, strenuous activities, imterleukins mentioned in study by Federico Balague et al[15] .

In research done by De Palma and Ketchum[16] , intervertebral disc prolapse accounts for 42% of cases of low back pain in comparsion to 1.3% as mentioned in our studies

In our studies physical therapy, medications, TENS, were employed as treatment modalities with maximum symptom relief and in only 60/3994 cases surgical intervention were needed in comparison to research done by Laxmaiah Manchikanti et al[17] : in which treatment modalities were epidural injections, percutaneous adhesiolysis, intradiscal therapy, annular thermal therapy.

Grey areas / limitations: All the topics dealt in this article deserve a separate research for the field purposes. More wider based studies are required to quantify the problem with involvement of private sector health care centers.

CONCLUSIONS

In acute cases of low backache, a large percentage of patients were having undiagnosed hypertension while the chronic group has alarming number of patients having depression. The patients undergoing surgical interventions; majority are still on follow up but the prognosis of surgery depends upon different factors like indication of surgery.

Conflict of interests: The authors declare no conflict of interests.

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