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PREVALENCE OF LOW BACK PAIN IN ESI (EMPLOYEES STATE INSURANCE) SCHEME WORKERS IN WESTERN TAMIL NADU – AN EPIDEMIOLOGICAL STUDY

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ABSTRACT

Back pain is one of the most common causative factor in long term work incapacity & early retirement. Psychosocial issues, age, Gender, Socio economic status have significant effect upon low back pain in the ESI scheme working personals.

Keywords: Low Back Pain, Tamil Nadu, ESI Scheme Workers, Psychosocial Issues, Job Satisfaction

INTRODUCTION

Low back pain is a common condition that disables significantly the industrial workers from total involvement in the work. Low back pain and its associated impairment and disability are significant medical and occupational problems. Many of the ESI scheme workers suffer at least 3 – 5 episodes of low backache in their working period. The seriousness of low back pain in work force has often been stated with serious concern in developing countries like India & elsewhere. Back pain poses enormous challenge to pain management specialists. This problem is further aggravated by ignorance to report for early treatment and by occupational compulsions.

According to Borenstein, low back pain should be viewed as a medical disaster with the goal being to return to regular physical activities as quickly as possible and to enable the patient to receive the most beneficial care at optimal times. In up to 75% of the patients with acute low back pain, the precise anatomical location could not be identified. In our observation, among the workers (Insured persons), the life time prevalence of low back pain was found to be 70% higher than in the ESI scheme beneficiaries (non Insured persons) i.e. family members of the workers.

Our study had identified, lifting & transferring tasks of heavy weights, forceful exertion, and bending forwards, twisting postures as major contributing factors for low backpain and back injuries. Our study showed that low back pain results in almost 25% more days of sickness absence (medical leave) annually than the days of sickness absence due to other symptoms.

The prognosis for full recovery and return to work from an episode of acute low backpain is excellent. Though most patients recover quickly from acute episode, the risk of recurrence is high and is seen in 60% of patients in a year. The various terms used to refer to the low back pain are Lumbago, Sprain, Strain, Mechanical low back pain, Lumbar Syndrome. The present study was carried out to find out the psychosocial and demographic problems that contribute to the incidence of low back pain. In our surgical practice patients with renal problem also complaints of back pain- loin region that also included in the study.

MATERIALS AND METHODS

This was a prospective study from 2013 to 2016, carried out in our institution. All the patients in the age group of 20 – 50 years with the complaints of low backpain were examined and interviewed for contributory psychiatric and work related problems. Patients with the Clinicoradiological evidence of low back surgery done in the past, back tumours, fracture dislocations, spinal deformities, e.g. scoliosis, prolapsed intervertebral discs, malignancy in spine, osteoporosis, multiple sclerosis, myopathy, pregnancy, Tuberculosis, kidney problems, spondylolisthesis, unwillingness to co-operate were excluded from the study. As control, same number of patients who did not have low back pain but attended the

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neuro outpatients department for other complaints were taken up for comparison and interviewed. Data were collected using different questionnaires.

The questions were designed to cover 1. Personal & Professional data. 2. Prevalence of back pain. 3. Possible causes & mechanisms for the genesis of low back pain & their effects on the quality of work. Speilberger & Beck's standardized questionnaires with the established reliability and validity were used to assess anxiety and depression respectively. General job satisfaction was assessed by their attitudes towards their work. All the persons taking part in the survey were asked to answer the questionnaires honestly.

Table 1: Back Pain Prevalence in the Working Personnals

Period of Prevalence	Prevalence Rates
Point Prevalence	52%
Last month Prevalence	37.3%
Six Months Prevalence	40.0%
Annual Prevalence	36.2%

Table: 2

Characteristics of Samples	% of Frequency of Total Samples	Number of Patients with Significant Psychosocial Impact
Gender		
Male	69.1%	70%
Female	30.9%	70%
Age		
< 25	741 (41%)	235 1.3 %
25-35	436 (41.1%)	3992 22.07%
35-45	77760 (42.9%)	4197 23.2%
> 45	2152 (11.9%)	1375 7.6%
Social Economic Status:		
Poor	4704	26%
Middle	11468	63.4%
Good	1917	10.6%

Observations

Of the 51,683 Patients attending the neuro and surgical out patients department during 2013 – 2016 there were 18089 (35%) patients with low back pain. A total of 27495 roentgenograms were done in these patients (1.52% per patient). 4685 Patients (25.9%) with LBA had to change or leave the job. 9406 (52%) patients had non – organic (or) psycho – social issues. 11215 (62%) patients were heavy manual workers. 5064 (28%) were light manual workers. 1809 (10%) patients were supervisors, not performing any manual works. When compared with controls, 72% of the patients with Low backache expressed dissatisfaction about the nature of the work & were unsure about the ability to continue the work in the future and opted for less strenuous works.

RESULTS AND DISCUSSION

Results

Of the patients attending the neuro and surgical outpatient department for various complaints, one in three (1/3) had Low back pain. Lifting heavy weights was the most common mechanism for the back pain (36.2%) Prolonged standing & walking as part of work were the significant aggravating factors (57.6%) and taking rest was the significant relieving factor (59.2%). There was significant correlation between working duration and frequency of occurrence of LBA. Significant co-relation was found between job

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satisfaction ($p=0.001$) and job dissatisfaction ($p=0.001$). There was a significant correlation between low back ache and age & gender, socio economic status, Body mass index.

Discussion

Back pain is the 3rd most common reason, next to headache & giddiness for visits to our neuro out patient department. Conventionally, the treatment for this problem was on conservative line with rest, NSAIDS, physical therapy, spine strengthening exercises. When conservative therapy failed to provide satisfactory relief, interventions with epidural steroids with lignocain, trigger point steroidal injections were performed with good results. Studies have shown satisfactory results with epidural steroids with lignocain (Gupta *et al.*, 1987).

Non organic and psychosocial issues clearly have, an adverse impact on the outcome of the treatment for low back ache. Feyer and Herbison (2000) has demonstrated that prediction for chronicity in patients with an episode of acute low back pain was most successful by assessing the presence of ‘fear avoidance’ variables.

Recent guide in the management of low back pain include short centre based intensive rehabilitation programme followed by a home based programme for chronic low back pain, psychological care of low back pain. Spinal strengthening exercises along with adjuvant physical therapies (ultra sound application, wax bath, medical diatherapy (SWD). Laser application, if combined with centre based short rehabilitation program powered with home based program and psychological expertise, not only optimise the prevention and treatment of low back pain but also offer a contribution-cost containment.

Conclusion

The result of the study demonstrates that the magnitude of the low back ache among the working personal, appear to be high and therefore, more resources to be allocated to its prevention. Also improving job satisfaction and supportive atmosphere at the working place may significantly contribute to the prevention of low back ache. However, further research is certainly needed to evaluate the effect of different preventive strategies.

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