

# MANAGEMENT OF LOW BACK PAIN – Critical Evaluation

Dr. S.B. Singh\*, Mr. Ayodhya Prasad\*\* & Prof. S.V. Sharma\*\*\*

Prospective study of 102 patients were conducted for low back pain from January, 1990 to July, 1992. Young adults (55) and sedentary workers (49) are more prone to low back pain. Idiopathic group (49) dominated in series.

All the patients were treated by conservative method except 4 who had gone for surgery. Thirty six patients showed excellent and rest showed good (27) and fair (27) result.

Low back pain is common disorder of musculoskeletal symptoms. Only in small group of patients any organic lesion can be found out and therefore in many cases etiology is speculative and treatment is empirical. This study is proposed to explore the various etiological factors and its implication on management.

## Material and Methods :

Patients with low back pain were selected from the Outpatients department of University Hospital, Varanasi from January, 1990 to July, 1992.

Patients were examined clinically and radiologically to detect any spinal lesion. Clinically low back pain was defined as pain between lower ribs and the gluteal folds with minimal radiation to thigh and knee. In female pelvic lesions were excluded by gynaecologist. Various investigations included radiograph of spine and sacroiliac joints, Rheumatoid factor, HLA B27 antigen. The patients were grouped in specific disorders and idiopathic group where no cause was attributed for low back pain. All patients were treated by different methods. Bed rest was advised as complete hard bed rest for 10 days and diclofenac sodium 50 mg. was given only at the demand. In drug group diclofenac sodium is given in doses of 50 mg. three times in a day for 10 days after meals and in other chloromazonone is given as 100 mg. three times in day for 10 days. In both the drug

group, mobility was allowed. Spinal exercises was advised as back extension exercises 15 minutes three times in day. Short wave diathermy was given, as 11 meter (27.33 Hz) 15 minutes daily at one day interval for 10 sitting. Lumbosacral brace was given for day time and in night, bed rest was advised, pelvic belt traction was given daily for 10 days. Eleven patients were excluded from treatment (Tuberculosis 7, Rheumatoid 4).

## Observation and Results :

Hundred and two patients were studied. Idiopathic group dominated the series (Table 1). All the patients were treated and results were shown in (Table 2). Patients were followed up to average of 12 months, eight patients developed recurrence of low back pain. Evaluation of pain was done by pain and functional assessment scale (Jackson 1992). As per grading twenty five patients were in excellent group, fifty patients were in good and twenty seven patients were in fair group.

## Discussion :

Various factors have been speculated for the causation of low back pain. Low back pain tends to begin in the third decade of life and reacts its maximal frequency during the middle age (Biering et al 1983). In our series 55 patients (53.9%) belong to 3rd and 4th decade. Individual height, weight and body build do not have any correlation

\* Sr. Resident,  
\*\* Physiotherapist,  
\*\*\* Professor & Head

Department of Orthopaedic, Institute of Medical Science, Banaras Hindu University, Varanasi.  
Address for Correspondence : Dr. S.B. Singh, 556-G, DLW Colony, Varanasi.

**Table 1 : Showing the Age, Profession and Diagnosis of the Patients.**

| Age (Years)                 | Number of Patients |
|-----------------------------|--------------------|
| 15-20                       | 12                 |
| 21-40                       | 55                 |
| 41-60                       | 35                 |
| <i>Profession</i>           |                    |
| House wife                  | 22                 |
| Student                     | 21                 |
| Sedentary worker            | 49                 |
| Manual worker               | 10                 |
| <i>Diagnosis</i>            |                    |
| 1. Idiopathic               | 49                 |
| 2. Non specific sacroilitis | 10                 |
| 3. Lumbar spondylosis       | 9                  |
| 4. Disc prolapse            | 8                  |
| 5. Tuberculosis spine       | 7                  |
| 6. Rheumatoid               | 4                  |
| 7. Old trauma               | 4                  |
| 8. Spondylolisthesis        | 4                  |
| 9. Lumbar canal stenosis    | 2                  |
| 10. Osteoporosis            | 3                  |
| 11. Ankylosing spondylitis  | 2                  |

**Table 2 : Showing various form of treatment – Low Back Pain Patients (Total N = 91).**

| Treatment               |    | Duration less than 3 weeks |   |   | Duration more than 3 weeks |   |   |
|-------------------------|----|----------------------------|---|---|----------------------------|---|---|
|                         |    | E                          | G | F | E                          | G | F |
| 1. Bed rest             | 21 | 10                         | 3 | 2 | 3                          | 2 | 1 |
| 2. Diclofenac           | 12 | 4                          | 2 | 1 | 2                          | 2 | 1 |
| 3. Chlormezonone        | 12 | 2                          | 1 | 3 | 1                          | 1 | 4 |
| 4. Spinal Exercises     | 11 | 2                          | 1 | 2 | 2                          | 1 | 3 |
| 5. Short wave diathermy | 15 | 3                          | 3 | 1 | —                          | 1 | 1 |
| 6. Lumbosacral brace    | 06 | —                          | 2 | 2 | —                          | 1 | 1 |
| 7. Pelvic belt traction | 10 | 2                          | 1 | 2 | 1                          | 2 | 2 |
| 8. Laminectomy          | 04 | —                          | — | — | 2                          | 1 | 1 |

E = Excellent, G = Good, F = Fair

to the occurrence (Pope et al 1985). Low back pain is common in 35 per cent of sedentary workers and 45% of heavy handlers (Rowe 1969). In this series also 49 patients (48%) are sedentary worker. It may be attributed to the abnormal postures and poorly developed back muscle. There is no predilection for sex but operation for disc are performed twice as often in men as in women (Sprangfort 1972). Risk factors associated with severe low back pain jobs with repetitive heavy lifting, the use of machine tools, the operation of motor vehicle, vibration, smoke (Kelsey et al 1984). Pain in lumbar spondylotic spine could be result of dysfunction, instability and stabilisation phase as stiffness (Kirkaldy-Willis et al 1982). Puig et al 1982 demonstrated diminished amount of endorphins-chronic low back pain. Devor M (1989) postulated new theory of low back pain, that various centres in brain stem can be modulated by various psychological influences and can alter the production of pain mediating chemical substances such as enkephalines, serotonin etc. Because of this person interprets more pain when he is tired or depressed. In rats gene for special type of pain sensitivity has been found (Wall 1990). Free nerve endings are present in outer part of the annulus fibrosus is the dorsal longitudinal ligament and in the facet joint capsule (Bagduk 1988).

The pathomechanism of pain in spondylolisthesis may be due to instability as demonstrated by traction and compression

radiography (Freberg 1987). Similarly in spinal stenosis various obstruction caused by mechanical compression results a pain. There is always a doubt over investigation like EMG, Myelography, CT-Scan, MRI. All have been used and have demonstrated 90-98% disc hernia in patients with appropriate symptoms. In normal volunteers without known symptoms 28-35% show the same finding (Boden et al 1990, Wiesel 1984). The natural history of idiopathic low back pain is good and 90% of patients return to work within 6 weeks (Frymoyer 1988). In our series the conservative treatment seems to be good as it shows relief of pain in 64 LBP patient out of 91 and no recurrence was seen in 12 months follow up.

Prospective randomised trial have demonstrated effectiveness of pain suppression and return to work with few days bed rest and education at back program (Zachrisson-Forsell 1981). Nachemson 1992 reported good relief of pain in patients with chronic low back pain less than 3 months by bed rest, medication manipulation and general fitness exercise.

The only evidence of treatment effectiveness can be evaluated by randomised double blind controlled trial which in our set is very difficult to perform.

Regarding the management of low back pain it is clear that ill conceived diagnosis behaviour on the part of surgeon can lead to abnormal low back pains which may lead to abnormal treatment behaviour.

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