Low Back Pain in the Primary Care Setting

Peter Curtis, MD
Chapel Hill, North Carolina

I would like to commend Drs. Barton, Haight, Marsland, and Temple on their paper, entitled "Low Back Pain in the Primary Care Setting" (J Fam Pract 3:363-366, 1976). Their work shows the justification of developing data collection systems in primary care. At the same time, I have found their paper provocative in various respects and would like to offer some reactions and further perspectives on this subject.

Low back pain is an excellent example of a condition that requires study within the community over long periods of time and, so far, relatively little has been done to look at the periodicity of the problem, the possible environmental causes, and the use of a variety of therapeutic methods that give an early return to normal function. Nachemson[1] estimates that 70 to 80 percent of the world's population suffer disabling backache at some time in their lives; so not only does the "top of the iceberg" present to specialists (a fact mentioned by the authors), but a similar pattern occurs in low back pain seen by the primary care physician.

Troup[2] quotes a study comparing two population groups that had been absent from work due to illness. The cause in one group was specifically backache, in the other it was not. Yet 67 percent of the latter group, when questioned, mentioned having experienced low back pain. It appeared that there were "complainers" and "non-complainers" with the same back pain symptoms. What, then, characterizes the complainer who comes for medical help? The distinguishing factor probably lies within the realm of the patient's environment, personality, and health concepts. In fact, it may be analogous to Apley's comment that, "Little bellyachers grow up to be big bellyachers."

From the Department of Family Medicine, University of North Carolina, Chapel Hill, North Carolina. Requests for reprints should be addressed to Dr. Peter Curtis, Department of Family Medicine, Room 738, Clinical Sciences Building 220 H, University of North Carolina at Chapel Hill, Chapel Hill, NC 27514.

Incidence

The above-mentioned article by Barton et al is a retrospective study, and it would have been helpful if the work of other primary care researchers had been mentioned. Dillane et al[3] investigated a group of patients with low back pain and undertook a four-year follow-up. The peak incidence of attacks was in the age group of 50 to 60 years, a figure confirmed by Nachemson[1] and Hult,[4] but men were affected more than women. The bimodal distribution was not so evident in their studies. The peak incidence in the Medical College of Virginia (MCV) study of the 20 to 30-year age group is understandably explained by the predominance of this group in the age/sex structure of that practice. Another possibility is that the bimodal distribution could be due to initial episodes of low back pain followed by recurrences in later years. Dillane et al[3] showed that 44 percent of their original patients had further attacks within four years.

Associated Factors

The causes of backache are legion, but certain factors are established, for instance, trauma, manual labor, and structural deformities. It would have been interesting to learn from the MCV study the occupation and social

class of the patients. It has been shown that certain symptoms are presented more frequently by certain social classes. Westrin,[5] in an exhaustive study of patients with low back pain, offered the following factors which were statistically related:

1. Associated Medical Problems
   - Respiratory
   - Psychologic inadequacy
   - Trauma
   - Digestive
2. Environmental
   - Work – heavy labor
   - Sitting for long hours
   - Subordinate position in work hierarchy
   - Lack of job satisfaction
   - Working in the job for less than two years
3. Family
   - Marital problems
   - Children under seven years of age in the family
4. Individual
   - Depression
   - Anxiety
   - Excessive alcohol intake

Other factors that would merit further research include: prior trauma, associated cervical spine problems, number of pregnancies, and time spent sitting in an automobile. The association of obesity with low back pain, described by Dr. Barton and colleagues, is not well established in other countries, and it may be that this is a problem specific to North America.

Diagnosis

In the past, the examination of the musculoskeletal system has been inadequately taught to medical students and graduates, perhaps because there was tacit acceptance that patients with low back pain were "crocks." There is not much evidence that matters have improved, although research into back problems has increased rapidly in the past few years. The review of medical charts, which is being spearheaded by the MCV group, provides an excellent opportunity to evaluate the diagnostic abilities of students and physicians. For instance, did all the patients studied have leg length measurements taken? Significant shortening of one leg is one correctable cause of backache, yet how often is this checked? This form of audit is an excellent teaching mechanism. One of the problems it raises, however, is accuracy and conformity of diagnosis, in an area in which even the experts have great difficulty – this can greatly influence the validity of the descriptive studies.

Treatment

The authors describe various approaches to patient management used in their practice. All of these have limited effectiveness, but are established modes of treatment. This is, perhaps, an area in which the primary care physician should achieve more flexibility, as well as a rational approach designed to return the patient to normal life as rapidly as possible. While neurosis and anxiety may *produce* low back pain, these psychological problems can also be *caused* by long periods of inactivity prescribed by the doctor,[6] such as bedrest for backache.

A number of alternative forms of treatment are listed below. Some of them are of the "fringe" variety, but all have been shown to be effective, although there is no way of predicting which one is proper for any given patient.

A. Hypnosis
B. Osteopathic manipulative techniques[7-11]
C. Extradural injection of steroid and local anesthetic (in the office)[11]
D. Local injection, by steroids and/or local anesthetic, of trigger points in the low back area[12]
E. Injection of sclerosants to tighten stretched lumbosacral ligaments[13]
F. Posterior rhizotomy
G. Facet rhizotomy[14]

Many of these techniques are used by orthopedists, physical medicine specialists, and family physicians, particularly in Europe.

The family physician is ideally suited to evaluate important factors in the causes of low back pain and apply the appropriate therapy or referral procedure. It is important that there be an awareness of the therapeutic possibilities and the fact that advances in treatment can come from primary as well as tertiary care.

Drs. Barton, Haight, Marsland, and Temple have made a useful contribution to our knowledge of low back pain. Their contribution should be expanded to include larger numbers of cases from varying environments and more information from other, similar studies. It would be remiss of those in primary care research not to quote other work in the field, for that would reduce, to some degree, the respect their work deserves.

References

1. Nachemson AL: Low back pain – its etiology and treatment. Clin Med 78:18-24, 1971
2. Troup D: The biology of low back pain. New Scientist 65:17-19, 1975
3. Dillane TB, Fry J, Kalton Q: Acute back syndrome – a study from general practice. Br Med J 2:82-84, 1966
4. Hult L: Cervical, dorsal, and lumbar syndromes. Acta Orthop Scand (suppl 17): 79-84, 1954
5. Westrin CG: Low back sick listing. Acta Sociomed Scand 2:127-134, 1970
6. Chook EK: Criteria for return to work – low back pain. Industrial Medicine 41(2):32-34, 1972
7. Orpwood-Price DI: Manipulative methods for treating locomotor pain in general practice. J R Coll Gen Pract 21:214-220, 1971
8. Fisk JW: Backache in general practice. J R Coll Gen Pract 19:92-95, 1970
9. Curtis P: Osteopathic methods in family practice. Update 10:753-756, 1975
10. Barrett J, Golding DN: The management of low back pain and sciatica. Practitioner 208:118-124, 1972
11. Cyriax J: Textbook of Orthopaedic Medicine, ed 5. London, Bailliere Tindall, 1969
12. Schurman DJ, Nagel DA: Low back and leg pain. Primary Care 1:549-563, 1974
13. Polke M: Backache: Diagnosis and treatment of mechanical derrangement of the lumbar spine. Update 11:955-975, 1976
14. Shealy NC: Facets in back and sciatic pain. Minn Med 57:199-203, 1974