Quality of life of the hypertensive patient

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During the past 20 years, considerable research has been directed at defining treatment of patients with high blood pressure. Evaluation of the results of several major trials has shown that morbidity and mortality are reduced in successfully treated hypertensives. Unfortunately, however, antihypertensive drugs can have a negative impact on a patient's quality of life, as characterized by physical state, emotional well being, cognitive acuity, and sexual and social functioning. Some patients perceive that antihypertensive medications are more troubling than their seemingly symptomless disease. Too often, this contributes to noncompliance and ineffectual long-term treatment. As demonstrated by recent studies, social and behavioral science techniques can be used to help differentiate the effects that antihypertensive agents may have on a patient's quality of life. Thus, in addition to efficacy, serious side effects, and cost, the physician now can include impact on quality of life as a fourth factor in formulating an appropriate antihypertensive program.

The major factor limiting effective treatment of hypertension is noncompliance. This holds true for both pharmacologic and nonpharmacologic treatment programs. The reasons may derive from the patient's perception that he or she is asymptomatic, and from his/her belief that most, if not all, antihypertensive agents are likely to produce long-term side effects.^{1,2} Because hypertension, especially in its mildest form, may be asymptomatic, and because the initiation of antihypertensive therapy with subsequent side effects may interfere with the activities of daily life, it is not surprising that so many patients discontinue what they feel would be a life-long intrusion that would make them feel worse than the disease itself.

Recent efforts to address this problem have focused on producing drugs that cause fewer side effects, as well as on the development of techniques for assessing the influence of antihypertensive therapy on the patient's "quality of life."^{3,4} This report examines more closely the meaning of this term, provides a look at the implications for clinical practice, and summarizes recent studies in this area.

Withdrawal rates

The extent of this problem can be appreciated by noting the withdrawal rates in large clinical trials involving hypertensive patients. The persons participating in these studies were treated with conventional agents, including diuretics, reserpine, beta-blockers, and methyldopa.

The British Medical Research Council trial,⁵ with patient treatment years exceeding 85,000, had an overall withdrawal rate of 20-25 percent. Approximately 18 percent of patients taking propranolol and 21 percent of those on a thiazide diuretic withdrew because of adverse reactions. A withdrawal rate of 33 percent due to various side effects was reported by the Hypertension Detection and Follow-up Program⁶ after 5 years (Fig. 1). In this study of 5,485 patients being treated with a stepped-care approach, antihypertensive agents included chlorthalidone, spironolactone, methyldopa, reserpine, hydralazine, and guanethidine. The most frequent reactions were minor gastrointestinal distress, lethargy/drowsiness, dizziness, depression, rash, and weakness. Notably, sexual dysfunction was reported in 8 percent of active male participants.

In a study that analyzed compliance of 128 industrial workers on an antihypertensive regimen, Haynes and associates⁷ reported that 42 percent were taking less than 80 percent of their medication by the twelfth month of therapy.

The views of a patient's physicians and relatives reveal another aspect of this issue. Jachuck and coauthors⁸ gave questionnaires to 75 consecutive controlled hypertension patients; questionnaires were given to their relatives and physicians as well. Although all of the physicians considered the pa-

tients to be improved on therapy, only 36 of the patients did, and only 1 of the relatives did. In fact, all of the relatives but one considered the patient to be worse while on therapy. Lack of energy was the most commonly cited functional impairment (Fig. 2). The reasons underlying the differing opinions point to a lack of dialogue between patients and their physicians concerning medications. Many physicians will regard antihypertensive therapy that reduces blood pressure as successful, regardless of patients' concerns.

Toward a new view of effective therapy

Wenger and associates³ have suggested that a more comprehensive view of therapy beyond the goal of decreased severity of illness should be adopted. They state that the concept of total well being—physical, psychosocial, and functional improvements—should be incorporated into the therapeutic objective.

Recent interest in this concept as it applies to therapy of cardiovascular disorders has led to the inclusion of the quality of life component into clinical trials. Such parameters include measurements of an individual's ability to function in his/her daily routine and in social, emotional, occupational, and intellectual activities. It is also important to evaluate the patient's perceptions of how his/her health and well being have been affected, both positively and negatively, by therapeutic interventions.

Although a patient's attitude toward antihypertensive therapy may be reflected more or less directly by his or her attitude toward compliance, actual assessment of quality of life yields more revealing data. While scientifically valid assessment techniques vary, some data are available from a recent multicenter, randomized, double-blind trial⁹ that compared the effects of methyldopa (500 mg. twice daily), propranolol (80 mg. twice daily), and captopril (50 mg. twice daily) on 626 men with mild to moderate hypertension. Each patient was assigned randomly to receive one of these drugs following a 4-week placebo period. If diastolic pressure had not dropped to <90 mm. Hg after 8 weeks of therapy, hydrochlorothiazide (25 mg. twice daily) was added to the regimen. The primary goal of the study was to test the ability of objective psychometric techniques to detect differences in the effects of these agents on quality of life. To remove physician bias, an independent observer interviewed each patient to obtain the quality of life data. Assessment covered sense of well being, physical state, emotional state, intellectual function, and the ability to perform social roles satisfactorily.

Blood pressure was controlled equally in the

three treatment regimens. The withdrawal rate due to adverse reactions was significantly lower with captopril (8 percent) than with propranolol (13 percent) or methyldopa (20 percent) (Fig. 3). At completion of the 24-week active treatment period, there were no substantial differences among treatment programs for social participation, visual memory, or emotional status. Captopril demonstrated significantly favorable results in general well being, physical symptoms, work performance, life satisfaction, cognitive function, and sexual dysfunction when compared to methyldopa, and significantly more positive changes from baseline in

Fig. 1. *HDFP surveillance trial (n = 5,485): Discontinuations due to side effects during each year of treatment (from Curb, J.D., Borhani, N.O., Blaszkowski, T.P., et al., and the HDFP Cooperative Group,⁶ with permission.)*

Fig. 2. *Relatives' rating of impaired function of hypertensive patients (data from Jachuck and coauthors⁸).*

Fig. 3. Withdrawal from antihypertensive therapy (data from Croog and associates⁹).

general well being, physical symptoms, and sexual dysfunction when compared to propranolol. Overall, 20 percent more patients on methyldopa treatment and 15 percent more on propranolol therapy experienced a worsening in general well being in comparison with those taking captopril.

Differences among treatment groups could have been influenced by compliance, blood pressure control, previous antihypertensive therapy, or the addition of a diuretic. The latter factor negatively influenced quality of life measurements in all treatment groups, and dramatically in the propranolol group.

Conclusions

The findings of the studies discussed in this paper suggest that a patient's quality of life can be influenced by the drug selected for therapy. In addition to therapeutic outcome, the physician's drug choice can affect the patient's sense of well being, and, also, can help to ensure compliance with medication regimens.

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