SUMMARY. The purposes of this paper are severalfold: a) to avoid a cloak of product inference; b) to focus attention on the need to keep patients on long-term (antihypertensive) therapy with as few side effects as possible; c) to acknowledge certain arguments relating to side effects, some of which have engendered concern among respected authorities in the field; d) to underscore the validity of current health care preoccupations relating to cost containment and cost effectiveness; and e) to question the wisdom of certain governments around the world in suggesting that low-cost antihypertensive medications that are already available should be used in preference to newer and more costly drugs no matter what the theoretical or clinical justification.

KEY WORDS. quality of life, hypertension, cost effectiveness.

At the present time there are perhaps no more overused buzzwords in the broad area of health care than the terms quality of life and cost effectiveness. Thus, when I was invited by Dr. Opie to support the issue that quality of life is more important than cost effectiveness, I initially hesitated for several reasons. Although perhaps the best way to establish controversy is to entitle a "focused issue" with such a challenge, as a typically conservative clinical scientist my goals were not to reinforce subliminal commercial communication on the "quality of life." Additionally, I did not wish to add further discussion to the existing harangue about diuretics versus new classes of antihypertensive agents; the medical literature already is supersaturated with such discussions. Yet there is continuing need to reevaluate current therapeutic goals in terms of the quality of life and cost effectiveness. And so, I have modified the title of this essay — perhaps more awkwardly than Dr. Opie intended — to take advantage of the improvements of present-day antihypertensive therapy versus certain more pragmatic concerns of health care delivery.

“Quality of Life”

As suggested above, quality of life is now cloaked by a subliminal reference to certain forms of therapy that may be associated with fewer long-term side effects. At this point in my career in hypertension, I can look back on the selection of initial antihypertensive therapy with a broader perspective. I can remember the dilemma of deciding whether the patient treated with a ganglion-blocking drug had a drug-induced paralytic ileus or an acute surgical abdominal emergency, or whether the patient treated with other agents had drug-induced diseases such as the hexamethonium lung and hydralazine-induced lupus or the actual diseases. I recall the relief of patients engendered by the tradeoffs of severe constipation and loss of erection associated with ganglion blockade, for the greater frequency of bowel movements and loss of ejaculation associated with guanethidine. The alternatives of malignant hypertension, congestive heart failure, cerebral hemorrhage and thrombosis, and ruptured aneurysms were too real in those days. Hospital beds were filled with patients having these complications of untreated hypertension.

The context of quality of life, therefore, has changed from protection against catastrophic disability and death from strokes, cardiac failure, life-terminating hemorrhagic disease, and other complications from hypertension. Today we are more concerned with more occult threats to one’s quality of life: subtle signs of depression, chronic fatigue or weakness, hypokalemia, hyperglycemia, and hyperlipidemia.

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In other words, we now must factor into our therapeutic decision-making processes the costs of freedom from fear; other drugs and laboratory studies that control against biochemical and other side effects of therapy; and, of course, the benefits of secondary protection by antihypertensive therapy for the complications of associated diseases. *This form of decision-making has not been taught in lectures, the written word, or controversial discussions, but is learned through clinical experience and by enlightened doctor-patient communication.*

Elsewhere in this issue the thesis that some of these costs of treatment cannot be quantified will be discussed in greater detail. Although this thesis may be true, it is far more pragmatic than the thesis that the costs of an improved quality of life are not quantifiable. This concern, no doubt, relates to the unacceptable and simplistic considerations that the cost per tablet is a valid means for selecting therapy for hypertension or, for that matter, any other chronic illness.

Thus, quality of life is an important consideration and the definition of such quality is restricted primarily by the available therapeutic alternatives in clinical decision-making: other alternative therapies and their side effects (providing that such therapy is available), the alternatives of "no therapy," the constant fear of impending catastrophic complications, and the cost of therapy. All affect life's quality.

**Side Effect Considerations**

Some argue certain clinical and biochemical side effects of certain antihypertensive agents preclude their value for modern, initial, and long-term antihypertensive therapy. Some of the arguments verge on the realm of nonissues, if not invalid absurdities; yet other considerations, although also unresolved, demand our thinking.

As one example, consider the argument that all the earlier multicenter drug trials for the treatment of hypertension failed to demonstrate protection against myocardial infarction. Neither the Veterans Administration Cooperative Studies nor the U.S. Public Health Service Study (or other similar, costly multicenter studies) were designed to demonstrate this protection. They were initiated to demonstrate the efficacy of antihypertensive therapy and its protection against complications of hypertensive disease. The patients in these studies were too old and too few, with too severe disease, and were therefore followed for too short a time to demonstrate such protection. These studies were initiated 30 years ago when the validity of antihypertensive drug therapy itself was a controversy.

From this argument some have concluded that protection against myocardial infarction was not possible because diuretics elevated serum cholesterol levels. The non-sequitur argument has then been made that diuretics should not be used in the modern selection of initial antihypertensive therapy because of the possibility of provoking myocardial infarction. However, this concern can be answered by following current recommendations for the initial evaluation of a patient with hypertension. If hyperlipidemia were present and of real concern to the physician, alternative drugs could always be selected. Alternatively, if lipid levels were normal at the outset of prescription of the therapy, by repeating lipid studies periodically during thiazide therapy, hyperlipidemia could be detected and another antihypertensive agent could be selected. The same line of clinical practice applies with respect to the development of hypokalemia, hyperuricemia, hyperglycemia, hypercreatinemia, and hypercalcemia. Hence, by determining the costs of laboratory testing, more frequent office visits than may be necessary, and the use of other pharmacologic agents to counteract induced biochemical changes, it is possible to determine whether improved cost effectiveness can be achieved. The same line of reasoning may be employed to assess the quality of life issue; however, this must involve enlightened physician-patient communication and a valid means to determine and quantify indices of the quality of life.

**Conclusions**

In the final analysis, the example of antihypertensive therapy provides a model for modern, more sophisticated concerns that were not anticipated in the late 1950s and early 1960s when this new means of therapy was first introduced. Issues of the quality of life were related to life-death and severe complications of disease and therapy. Present-day issues of the quality of life have now focused upon rational alternatives for antihypertensive therapy and its associated factors of side effects, and perception of wellness as well as cost-effectiveness or cost-containment considerations. However, it is important to recognize that these issues should not condemn unwarrantedly certain classes of drugs solely with respect to cost in favor of others without reason. The cost of therapy is very important. Let us also not be cornered into the argument that the selection of any one agent — or group of agents — provides a better quality of life.