

Compliance in Elderly Hypertensives

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Hypertension is common in the elderly. While it is possible to reduce blood pressure in this age group, the value of such treatment in terms of reduced mortality and morbidity is unknown. The effects of a prescribed regimen depends *inter alia* on compliance. Therefore, this variable must be taken into account in assessing drug treatment in the elderly hypertensive. In general, the elderly comply well with drug treatment but there are a number of well defined problems in this age group.

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Introduction

The increasing number of elderly people in Western Europe is now well recognized, and this demographic trend is expected to continue. A recent World Health Organization epidemiological study on the elderly shows that during the final quarter of this century the number of people in the world over 60 is expected to almost double [1]. In Britain, those over 65 constitute 12% of the population compared with 5% at the turn of the century. A similar demographic shift in Japan will take place even faster than this. In Northern Europe the more disabled over 85 group will show the greatest increase in numbers but the 65-75 group will stay fairly constant.

It is well recognized that the elderly as a group account for a disproportionate amount of health care expenditure, a major proportion of this being spent on drugs. Most drug therapy is on a long-term basis for chronic illness such as hypertension. It makes sense therefore to address the problem of compliance in the elderly, not purely out of financial considerations but also because good compliance is a prerequisite for the achievement of the therapeutic goal.

A difficulty in discussing compliance is the lack of a generally accepted definition of the non-compliant patient. Thus one cannot assess accurately the size of the problem. Non-compliance has been variously and arbitrarily defined as the patient who takes anything from 50 to 90% of the prescribed drug treatment [2,3]. These figures taken in isolation are meaningless, as it is the clinical consequences of this non-compliance that is the important issue. Most studies of compliance among elderly patients reveal a compliance rate of between 25 and 85%. This wide range is similar to that found in

studies of young patients and reflects differences in definition, clinical setting and measurement techniques. Haynes *et al.* [4] reviewed 120 studies of ageing and compliance. In 29 of these there was an improvement in compliance with increasing age and in 77 there was no change. In a further 14 studies a fall in compliance was found with advancing years.

There are many practical matters that mitigate against good compliance in the elderly and these have been well documented [5,6]. They include poor vision, impaired hearing and reduced manual dexterity. Polypharmacy often compounds the problem. Schwartz *et al.* [6] have clearly shown that the errors in drug-taking are proportional to the number of drugs prescribed [6]. Many elderly patients are on two and sometimes three hypotensive agents in addition to the drugs they might be taking for other diseases. The similarity in appearance of many prescriptions is another negative influence.

In limited eligibility health care systems, the cost of medication is an extremely important determinant of compliance in all patients but in particular among elderly patients. We found that one-third of a group of hypertensive patients discontinued their medication because of the financial burden it imposed [7]. However, as 85% of patients aged 65 years and over are entitled to free medication in Ireland one would not expect compliance to be greatly affected by financial constraints.

Intelligent non-compliance

Weintraub *et al.* [8] has coined the phrase 'intelligent non-compliance'. By this they mean that on many occasions patients make a definite decision not to adhere

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to the therapeutic regimen. They usually decrease the dose or else may stop taking a medicine altogether. The stated reasons include unpleasant side-effects and the opinion that they (the patients) do not need so much medicine. As adverse drug reactions are particularly common in the elderly it is tempting to conclude that non-compliance in many cases has survival value! Clearly we need more data on the risk to benefit ratio in treating elderly hypertensives – what is to be gained in terms of morbidity and mortality and what may be the cost in adverse drug effects as well as financial cost.

Evidence from hypertension studies

Recent large-scale studies of hypertension throw some light on the effect of age on compliance. In the Australian National Blood Pressure Study (ANBPS) the overall withdrawal rate was 24.5%. In 85% of these patients, withdrawal was voluntary [9]. The majority of patients defaulted within the first 4 months of the study and the incidence was significantly higher in those aged less than 50 years.

The achievement of the therapeutic goal is another approach to the estimation of compliance. The Hypertension Detection and Follow-Up Program (HDFP) study shows that the elderly shared in the reduction in mortality associated with aggressive management of hypertension (Table 1) [10]. Clearly this reduction in mortality in the elderly may be due to other factors but good compliance among those patients is a prerequisite. The figures for clinic attendance at 2 years would support the view that the elderly attended for review at least as well as did the young (Table 2) [11]. The intensive efforts made in this study to maximize stepped-care patient attendance must however be kept in mind. Such a level of 'persuasion' cannot reasonably be expected in conventional clinical practice.

We are currently studying the compliance of young and elderly (65 years and over) hypertensives using

Table 1. Age, baseline diastolic blood pressure (DBP) and percentage reduction in mortality in the Hypertension Detection Follow-up Programme Study, 1979 [10]

Age (years)	Baseline DBP (mmHg)	Reduction in mortality (%)
30-49	101.2	5.7
50-59	100.8	25.3
60-69	101.6	16.4

Table 2. Percentage of patients in the stepped care group active at two years in the Hypertension Detection Follow-up Programme Study, 1982 [11]

Age (years)	% Active
30-39	81
40-49	85
50-59	85
60-69	83

oxprenolol tagged with isoniazid. The presence or absence of the metabolites of isoniazid in the urine provides evidence of the degree of compliance. Preliminary results suggest that the overall level of compliance is high and to date no difference in compliance between young and elderly subjects has emerged.

Many antihypertensive agents are associated with adverse effects and these occur more frequently in the elderly. Recognition of this problem is crucial in these patients if good compliance is to be achieved. Ideally, adverse reactions must be anticipated by the physician and appropriate measures taken to avoid them. Good communication between doctor and patient is essential. This is often difficult in the setting of a busy practice or clinic. The elderly patient must be instructed in the nature and purpose of all drugs prescribed. Compliance has been shown to improve where verbal instruction is supplemented by written memory aids [12]. Pharmacy accessibility must also be ensured. In dispensing medications it is important to have clear labelling and accessible containers. [13].

The elderly hypertensive patient presents the physician with a challenge. While the efficacy of antihypertensive drug in lowering blood pressure is clear, it is not known whether such treatment lowers morbidity and/or mortality in these patients. Not all elderly patients can readily comply and this must be kept in mind when assessing the value of antihypertensive treatment. However, it is probably true to say that the majority of elderly patients comply, at least as well as their younger counterparts. It seems to us that the elderly have been given the reputation of being poor compliers undeservedly. On the contrary, the evidence from hypertension studies suggests that compliance in the elderly is as good as in younger patients.

It is the duty of the physician to try and identify the patient who is not likely to follow instructions and to ensure as far as is practicable good compliance. Some factors associated with reduced compliance in the elderly are known and the rigour with which these are recognized and dealt with will be an important determinant of the cost effectiveness of medical care for these patients.

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