


Life-style and medication compliance in elderly patients

SIR—The results presented by Minors et al. that older subjects showed less day-to-day variation in lifestyle as obtained from diary reports [1] correspond to findings revealed by compliance monitoring. This indirect assessment method, continuous electronic compliance monitoring, provides information about the actual time history of patients’ medication dosing [2, 3]. Different aspects of medication compliance—drug consumption, adherence to the prescribed regimen, and timing-compliance as a measure of regular drug use—can be expressed quantitatively.

Maillon et al., using compliance monitoring in 590 hypertensive patients prescribed a QD regimen, recorded significantly fewer delayed doses in patients over 60 than those under 60 [4]. They also found significantly lower compliance on weekends than during the week, as had been shown by our group [5]. This finding was confirmed again in a recent study in which drug compliance with a QD (amlodipine) and a BID regimen (nifedipine) was monitored in patients with mild to moderate hypertension. J Hypertens 1998; 16: 1677.

Furthermore, non-compliance was twice as high with the evening than with the morning dose in the younger patients, while the elderly subjects showed no significant difference in compliance between the two doses.

Drug use may well correspond to elderly people’s regular patterns of lifestyle. In improving drug compliance, ‘routine’ daily activities have to be considered as cues for regular medication use.

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Letters to the Editor


Authors’ reply

SIR—Renteln-Kruse describes the higher compliance of elderly patients in comparison with younger controls with regard to taking medications, a compliance that was decreased in the evening and at weekends in the younger group. It was suggested that this might be associated with changes in the lifestyle of elderly subjects, who show decreasing intra-individual variation in bedtimes, meal times and social events. In our studies [1, 2], disruptions due to social events were present in elderly subjects but they were infrequent, and probably due to several causes amongst which were physical impairment and loss of social contacts.

Before we accept this as a general rule for elderly subjects, the chronobiological literature indicates three caveats.

1. Even although the intra-individual variability in drug compliance is expressed quantitatively, a good correlation between the expected and the observed occurrence of actual compliance is found. This suggests that changes in the daily rhythm of drug consumption may occur during weekends and holidays, but that regular patterns of lifestyle are still present. This may be due to the regular taking of medications, leading to the reduction of the effects of disruptions on drug compliance.

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habits falls with age, the inter-individual variability tends to rise [1]. That is, individuals might become more set in their ways as they age, but they might differ more from one another, particularly as constraints due to work, family and friends are removed. This result implies that regular medication should be linked to an event (e.g. rising from bed) rather than a clock time (e.g. 0800 h).

2. The measurements of lifestyle have concentrated on 'survivors' [3, 4], that is, individuals who are able to determine their lifestyle rather than those who are sufficiently disabled, mentally or physically, to have to be cared for by others. In such cases, regularity of habits would become the responsibility of the carer or institution.

3. The is some evidence that, in 'old-old' subjects (>74 years), there is a rise in daily variability of some aspects of lifestyle [4] and that this rise is more marked in subjects showing mental deterioration [5, 6]. Interestingly, attempts to increase the regularity of lifestyle in elderly subjects—by regular activity [7], exposure to bright light [8] or evening melatonin ingestion [9]—have all been claimed to have some success. Presumably, elderly subjects who are institutionalized will benefit from such imposed regularity.

In summary, it would seem that medication compliance in elderly subjects will be higher than in younger controls as long as individuals continue to maintain their regularity of habits; when this is not the case, the responsibility for regular medication would have to fall on the carer or institution.

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Urine collection and culture in elderly people

SIR—Michielson et al. report a simple way to collect urine samples in elderly women and compare their findings with the 'gold standard' of suprapubic aspiration of urine [1]. Their findings support earlier reports that strict vulval cleansing may not be essential [2, 3], but this preliminary report in a small, highly heterogeneous group of patients makes assessment of the utility of the method difficult. A negative culture clearly excludes infection, but no further light is shed on the difficult diagnosis of urinary infection in elderly subjects as the authors have placed too great a reliance on the Kass criteria. The Kass criteria with or without pyuria are not synonymous with infection, and lower counts may still signify infection [4].

Bacteriuria is common, frequently asymptomatic, and does not influence mortality or morbidity. To pursue it in the absence of acute symptoms, via traditional MSSU or sterile collection, is unnecessary [5]. Non-specific illness presentation is best pursued using blood cultures if infection is suspected. Interpretation of the findings of urine culture in elderly subjects remains problematic and indiscriminate urine culture and rigid adherence to the Kass criteria will lead to unnecessary treatment. A pragmatic approach in treating symptomatic infection would seem more appropriate.

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