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Research paper

Barriers to discontinuation of chronic benzodiazepine use in nursing home residents: Perceptions of general practitioners and nurses

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ABSTRACT

Background/Aim: Prescription guidelines caution against chronic benzodiazepine (BZD) use. Nevertheless, chronic use among older adults, especially in nursing homes is widespread. We wanted to explore why it is difficult to implement discontinuation. We focused on individual residents that used BZDs and explored benefit and harm of chronic BZD use, willingness to try and barriers against the discontinuation of chronic BZD use.

Methods: In this cross-sectional study, we selected nursing home residents with at least 3 months of BZD use. A resident-specific questionnaire was addressed to the GP and to the responsible nurse and questioned effectiveness, side effects, initiation and willingness to stop. For every resident, the GP and nurse had to score 8 barrier statements on a 10-point Likert scale. Additionally, we collected 10 general attitudes scored by GPs and nurses.

Results: We received data for 109 chronic BZD users. GPs and nurses indicated that the BZD still had the desired effect in respectively 87% and 83% of the 109 residents and in 75% and 70% they observed no side-effect. Dependence was seen in respectively 41% and 28%. Overall, the GPs had higher barriers than the nurses but indicated a higher willingness to stop (33% vs. 21%). Both caregivers were willing to stop in 13% of the residents.

Conclusion: The perceived effectiveness, the absence of side-effects and the presence of dependence in most residents on chronic BZD use resulted in a low willingness to stop. Future discontinuation guidelines should consider all caregivers' perceptions and promote a multidisciplinary approach.

1. Introduction

Benzodiazepines (BZDs) are indicated for the short-term treatment of insomnia and anxiety. They are the most commonly prescribed psychotropic drugs, especially among the nursing home population [1,2]. In most patients, their use becomes chronic. In Belgium, half of the nursing home population takes BZDs (including z-drugs) chronically [3]. Prescribing guidelines caution prescribers and patients against this chronic use [4–8]. Several research units launched a protocol to tackle chronic BZD prescribing and to investigate discontinuation [9–12]. Two studies reported success rates of 57% and 59%, respectively 2 and 10 years after discontinuation [13,14]. Nevertheless, chronic BZD use outside the research context remains high. Possible reasons for this discrepancy are the perceived dependence of BZDs [15] and the risk of withdrawal effects with temporary worsening of insomnia and anxiety [16,17]. Moreover, the perception among prescribers and patients of BZDs as harmless drugs [18] hinder discontinuation efforts.

Long-term BZD use is of particular concern because of the lack of proven continuous effectiveness [19] because of adverse effects such as sedation and hang-over effects [20] and because of potential acceleration of cognitive impairment [21]. Withdrawal attempts are recommended for long-term users. In the nursing home setting, both prescribers and nurses are important in the initiation and the discontinuation of BZDs. Therefore, it is crucial to understand the perceptions of prescribing general practitioners and nurses towards BZDs before engaging in efforts to obtain sustained change in chronic BZD use.

Qualitative studies have investigated the general perceptions of BZD use among patients [22], among physicians [23–25] and among nurses [26]. There are some quantitative studies [27–29], but these did not focus on possible discontinuation in an individual resident. The objective of this study was to investigate initiation,

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indications, previous stop attempts and perceived benefit and harm of BZDs as well as the willingness to stop chronic BZD use in individual nursing home residents. By focussing on perceptions pertaining to an individual resident, we hope to obtain a more realistic view on the feasibility to discontinue chronic BZD use. We wanted to capture resident-specific barriers and also general attitudes towards discontinuation of chronic BZD use among the two key caregivers in the nursing home setting (the general practitioner and the nurse).

2. Methods

This was a cross-sectional study based on a resident-specific questionnaire addressed to the general practitioner (GP) and to the nurse.

2.1. Development of the questionnaire

As we did not find examples in literature specific to the nursing home setting, we developed a questionnaire based on an expert meeting. The expert meeting included different representatives of geriatric care (GPs, nurses, nurse assistants, pharmacists and clinical pharmacologists) and focussed on the discontinuation of BZD use. We discussed the results, developed a questionnaire intended for GPs and nurses and designed to be filled in for each individual resident in order to avoid global impressions. The questionnaire was developed with the expertise of an epidemiological researcher, GP, pharmacist and nurse. The preliminary version of the questionnaire was pretested among GPs and nurses for 5 residents.

As shown in Table 2, the resident-specific questionnaire examined indications (insomnia, anxiety, depression, agitation), where and when the BZD was initiated (before entering the nursing home, in the nursing home, during hospital admission, unknown), whether the BZD still showed benefit, whether there were any side-effects (listed by the Belgian farmacotherapeutic information centre [30]: sedation during the day, confusion, muscle weakness, concentration problems, apathy, memory problems, dizziness, physical and psychological dependence) or previous stop-attempts and the willingness to stop chronic BZD use in each individual resident. Furthermore, we wanted to identify possible barriers against discontinuation. We formulated eight resident-specific barriers to be scored on a 10-point Likert scale, with a higher score indicating agreement with the barrier statement.

Additionally, we collected ten general attitudes (not resident specific) towards BZD discontinuation of the GPs and nurses. These were also scored on a 10-point Likert scale.

2.2. Inclusion of nursing home residents

In a convenience sample of five nursing homes in the region of Antwerp, Belgium, we screened medication charts and included those residents that used BZDs daily for at least three months (chronic). The Anatomical Therapeutic and Chemical Classification (WHO 2012) was used to define BZD use including the classes N05BA (anxiolytics), N05CD (hypnotics), N05CF (z drugs) and clonazepam (N03AE01). Tetrazepam (M03BX07) was included in our analysis but is withdrawn from the Belgian market since September 2013.

2.3. Data collection

After selecting the residents with chronic BZD use, the questionnaires were delivered to the medical coordinator of the nursing home, who handed them over to the head nurse and to the GP responsible for the specific resident. In Belgian nursing homes, residents are supervised by their own GP, with an average of 32 GPs per nursing home (Elseviers et al., 2010). Data collection was performed between November 2011 and March 2012. Data collection included demographic and functional information of the resident. Functional characteristics were scored by the KATZ scale [31]. This instrument is mandatory in the Belgian nursing homes. The first part of this instrument scores six activities of daily living (ADL) from 1 (independent) to 4 (total dependent) and the sum score can range from min. 6 to max. 24. The second part scores disorientation in time and place, each ranging from 1 (no disorientation) to 4 (severe disorientation) and was used as a proxy to estimate the mental competence. A disorientation sum score of more than 4 was considered as impaired mental competence.

2.4. Statistical analysis

All statistical analyses were performed using the statistical package IBM SPSS statistics version 20 with $p < 0.05$ as the level of significance. Level of agreement between GP and nurse was assessed using kappa coefficients and descriptive percentages of positive agreement. The barrier statements as well as the general attitudes, both scored on a 10 point Likert scale, were described using medians and ranges. Differences between GP and nurse were assessed using non-parametric statistics: the barrier statements with Wilcoxon Signed Rank test for paired observations and the general attitudes with Mann-Whitney U test. The internal consistency (cronbach's alfa) of the general barriers was 0.80 for the GPs and 0.76 for the nurses, and of the resident-specific barriers, this was 0.76 and 0.83, respectively.

2.5. Ethical consideration

This study was approved by the Ethics committee of the University Hospital Antwerp (approval number B300201112279). The participating nursing home management, nurses and GPs all gave approval. All information of the resident was coded. We communicated with the GPs and nurses through the coordinating physician of the nursing home.

3. Results

3.1. Study population

In the five participating nursing homes (total of 570 beds), 170 (30%) residents took BZDs chronically. In this study, we only included those residents for whom we received completed questionnaires from both the GP and the nurse. We received completed questionnaires for 109 residents (response rate of 64%); 25 GPs and 16 nurses filled in the questionnaires (Fig. 1).

Of the 109 residents, the mean age was 86 years (range 60–100) and 81% was female. The mean time spent in the nursing home was 40 months. The mean activities of daily living score was 15, with mainly problems with washing and clothing. Around one third (30%) of this population was considered to have impaired mental competence (Table 1).

The most prescribed BZD was zolpidem (28%), followed by lorazepam (27%) and lormetazepam (20%). Concomitant BZD use was seen in 8% of the residents (Table 1).

3.2. Initiation, indication and previous attempts to stop chronic benzodiazepine use

GPs and nurses did not know where the BZD was initiated in respectively 15% and 26% of the residents. According to the GPs, 62% of the chronic BZD users started before entering the nursing home, 22% in the nursing home itself and less than 1% in the hospital. According to the nurses, 46% of the residents started BZD