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Comparable indicators of therapeutic misconception between epilepsy or Parkinson's disease patients between those with clinical trial experience and trial non-participants

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ABSTRACT

Purpose: Study design, personal persuasions, and experiences can influence willingness to participate in clinical trials (CTs). A study assessed differences between Parkinson's disease (PD) or epilepsy patients having participated in CTs and non-participants in knowledge of and attitudes toward CTs. Also considered were factors in willingness to take part and how CT participants experienced the informed consent process.

Method: Random samples of members of Finland's PD (n = 2000) and epilepsy (n = 1875) patient organisations were posted a questionnaire on their views about CTs. Of the 1050 questionnaires returned, 845 met inclusion criteria. In total, 126 had participated in CTs.

Results: While over 90% of respondents knew that participation is always voluntary, CT participants were more often aware that one can withdraw ($p < 0.001$). In both groups, most did not recognise the possibility of randomisation, and 57% in both CT participants and non-participants indicated that CTs are aimed primarily at seeking the best medication for the participant. Nevertheless, 83% of CT participants indicated ability to understand the information provided.

Conclusions: While most in our study agreed that patients should be asked to participate in CTs, only 15% of subjects had done so. The discrepancy between willingness to participate and recruitment figures could be minimised by improving knowledge of CTs and communication between patients and researchers. Additionally, the groups displayed comparable false CT-related assumptions, raising questions about whether these subjects fully understood the clinical research's ultimate goal and CT participants had given true informed consent. These issues have practical and ethics implications for clinical investigators.

1. Introduction

Clinical trials (CTs) are necessary for the development and approval of new medical therapies. A sufficient number of potentially enrolling study participants is a critical component of high CT quality. Attitudes toward CTs are positive among the general public and in various patient groups alike [1–3], yet recruitment of suitable patients may be challenging [4,5]. Altruism and a desire to contribute to science are major motivating factors for participation in CTs among patients with various disorders [3,6]. However, expectations of personal health benefits and of research providing access to health-care services are reported to be equally important factors driving participation in CTs [2,3,7]. Patients seem to appreciate the attention paid to them during the course of CTs, and most of them have high expectations of the therapeutic effects of the study medication [1,2,8].

Before entering a CT, potential participants are required to give written informed consent for respecting their autonomy and protecting them from exploitation [9]. It can be challenging to fulfil the various elements of informed consent. The purpose and the method of CTs often differ greatly from those in standard medical treatment; for instance,

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CTs may include randomisation of the subjects, blinding of the participant and the investigator, and the use of placebo. Patients often have difficulties in understanding these issues [2,10]. The concept of therapeutic misconception (TM) refers to a situation wherein CT participants fail to recognise the differences between clinical research and standard medical care and, hence, the requirements for informed consent are not met [11,12]. A recent systematic review concluded that the proportion of CT participants who actually understand the individual components of informed consent ranges from 52% to 76% [10].

Epilepsy and Parkinson's disease (PD) are neurological disorders under active clinical research. In recent years, attitudes toward CTs, motivation for participation, and understanding of study information by selected groups of patients with epilepsy or PD have been reported [2,13–18]. One challenge with disorders such as epilepsy and PD is that those invited to participate in a CT may include cognitively challenged subjects. Thus, comprehension of the study information can be compromised [14,15]. Indeed, in one study, 42% of patients who had participated in a CT stated after enrolling in the 12-month trial that participation in the study was a part of the usual treatment for their disease [14]. These findings also highlight the importance of written informed consent.

We have previously assessed knowledge of and attitudes toward CTs in two large populations of patients with epilepsy [19] or PD [20]. Both patient groups included subjects who had participated in CTs. The aim of the study was to compare knowledge of and attitudes toward CTs, alongside issues related to TM, between members of the two populations: patients who had taken part in a CT and those who had not. Furthermore, we examined issues affecting willingness to participate in clinical drug trials and how CT participants had experienced the process related to informed consent.

2. Methods

2.1. The study sample

The subjects in the study consisted of a random sample of members of patient organisations who have epilepsy (n = 1875, from a membership base of 7500) or PD (n = 2000, from a total association membership of 8000). The patient organisations were the Finnish Epilepsy Association (FEA), which is the Finnish chapter of the International Bureau for Epilepsy, and the Finnish Parkinson Association (FPA). The lists of patients to whom the material was to be sent were generated by the FEA and FPA via randomisation, in which every fourth person on the member list was selected. The study information sheet and covering letter, sent to the subjects identified, requested a response from only adults with a diagnosis of epilepsy or PD who were able to give responses independently. A breakdown of the data-gathering process applied in the study is shown in Fig. 1. In total, 1050 questionnaires were returned for a response rate of 27%.

The study was conducted in compliance with the Declaration of Helsinki, and a favourable opinion of the study was obtained from the Research Ethics Committee of the University of Eastern Finland. The study was also approved by the Executive Board of the FEA and of the FPA. Moreover, the FEA and FPA staff sent the study questionnaires to the participants in order to ensure their privacy. The investigators did not have access to the study population's personal data, and the responses to the questionnaire were given anonymously.

2.2. The data

The data for the study were obtained via a questionnaire developed for the purposes of our previous studies [19,21]. In brief, the questionnaire, which was to be selfadministered by the patients, was based on previous literature [22,23] and pilot testing among patients with PD (n = 12). The first part of the questionnaire covered data on demographic and socio-economic matters, along with clinical aspects of

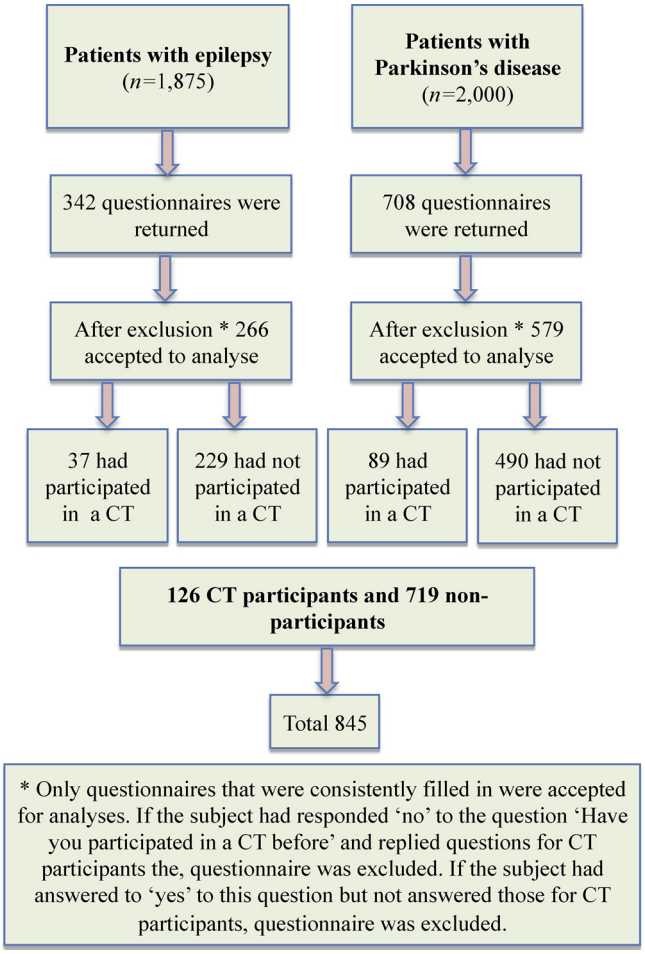

Fig. 1. An outline of the process of data-collection.

epilepsy or PD and its treatment. The second part formed the actual survey instrument, which featured 50 items addressing elements such as knowledge of and attitudes toward CTs, factors associated with willingness to participate in CTs, and experiences of the informed consent process. The subjects responded to each item's statement by using a five-option Likert scale, where the options were 'strongly disagree' [1], 'disagree' [2], 'cannot say' [3], 'agree' [4], and 'strongly agree' [5].

2.3. Statistical analysis

The data were analysed by means of the SPSS Statistics 21.0 statistical analysis software. The background information was characterised in terms of frequency and percentage distributions. Frequencies, means, and standard deviations (SDs) were used to describe the CT participants' and non-participants' attitudes and knowledge of CTs, motivation for participation / potential participation, and expectations of personal health benefits. For clearer presentation of the results, agreement and disagreement categories were formed by combining the 'agree' and 'strongly agree' responses and the 'disagree' and 'strongly disagree' responses, respectively. Pearson's chi-squared test was used to determine differences in clinical variables between CT participants and non-participants. A non-parametric Mann–Whitney U test was used to determine differences between CT participants and non-participants for the statements. The results were considered statistically significant at $p < 0.05$.