Validation of the French translated version of the Osteoporosis Specific Morisky Medication Adherence Scale (OS-MMAS) in France

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INTRODUCTION

• Oral bisphosphonates (OBPs) are the most commonly used osteoporosis treatment.
• Low adherence to OBPs therapy is common and is associated with poor outcomes (increased of osteoporosis fractures) and increased treatment costs[1].
• If clinicians were able to assess treatment adherence, they could counsel patients effectively and better manage their treatment.
• The Morisky Medication Adherence Scale (MMAS) is a simple tool that has been validated in chronic conditions such as hypertension.
• Minor modifications were made to the MMAS to make it more suitable for measuring medication adherence in patients treated with oral medications for osteoporosis (OS-MMAS).
• Recent evaluation of the OS-MMAS indicated that the OS-MMAS showed strong psychometric properties with good reliability and construct validity [2].
• Initially developed in English language, the tool has been translated in number of European languages, including French, Dutch and German;
• Translations were performed by a professional organization specialized in linguistic translation. Backward and forward translations were considered.

OBJECTIVE

This study evaluates the measurement properties (internal consistency, reproducibility, convergence validity and construct validity) of the French translated version of the OS-MMAS.

METHODS

• This is an observational study of about 400 women with post menopausal osteoporosis (POMO) treated with daily or weekly oral bisphosphonates.
• Using the Cegedim French Longitudinal Patient Database (LPD), general practice physicians were invited to identify oral bisphosphonate treated POMO patients.
• Eligible patient were women aged 55 years or older who received their first prescription of daily or weekly oral bisphosphonate therapy at least 6 months prior to the clinic visit and with a prescription of an oral bisphosphonate within the 18 months prior to the same visit
• Subjects meeting any of the following criteria were excluded:
  • Current use of medications prescribed for osteoporosis treatment other than oral daily or weekly bisphosphonate. Patients on calcium and/or vitamin D were not excluded.
  • Currently enrolled in or within 1 month of participating in another investigational device or drug trial.
  • Evidence of alcohol or substance-abuse, Alzheimer and/or dementia within the last 12 months that the investigator believed would interfere with understanding or completing the questionnaire.
  • Eligible patients were consented for the study following a routine visit to their participating general practice (GP), were given a self-administered OS-MMAS questionnaire for completion at home and asked to return the completed questionnaire by prepaid mail.
  • For test re-test purposes, a subset of respondents to the initial OS-MMAS questionnaire, received a second self-administered OS-MMAS questionnaire one month later.
  • Data from the self-administered questionnaires , linked prescription history and information collected during enrolment visit using computerised pop-up screen, constituted the main data needed for the study.
  • Responses to the OS-MMAS were used to assess the measurement properties of the tool.

METHODS (cont’d)

• Agreement (using spearman correlation and Chi-square tests) between the oral bisphosphonate prescription history (summarized using the medication procession ratio) and the derived total score from OS-MMAS questionnaires were used to explore the potential clinical utility of the OS-MMAS scale.
• The internal consistency of the OS-MMAS was evaluated using the Cronbach’s coefficient, using responses from 1st OS-MMAS.
• The reproducibility of the tool was evaluated using the intraclass correlation coefficient (ICC), the Bland Altman test and the paired t-test.
• The construct validity of the tool was assessed using confirmatory factor analysis (CFA).

RESULTS (cont’d)

• From the Cegedim network of 1200 French GPs, 1050 were invited to take part, of which 113 (10.8%) agreed to participate.
• 70 of the 113 GPs enrolled at least 1 patient.
• 687 eligible women visited these practices during the period 20-Jul-2012 to 31-Dec-2012. Of these women, 218 (mean 73.2 years; SD= 8.1) completed ≥1 OS-MMAS, with 146 patients completing the first only.

Figure 2. Study Flow Chart

CONCLUSIONS

• Overall, this study demonstrated acceptable agreement between classification of patient’s adherence to OBPs assessed using French translated OS-MMAS and that using historical 6 months MPR; but also indicated that the construct of the OS-MMAS could be improved. The reproducibility of the OS-MMAS score was though very low, irrespective of statistical method used.

REFERENCE


DISCLOSURE STATEMENT

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