CO7 Patient Reported Outcome Measure for Giant Cell Arteritis: Cross-Sectional Validation Study

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Objectives

Giant cell arteritis (GCA) presents in people over the age of 50 with cranial, ocular, and large vessel vasculitis. This study aims to validate a disease-specific patient reported outcome (PRO) measure for patients with GCA, to capture the impact of GCA and its treatment on health-related quality of life.

Methods

This cross-sectional study included UK patients (n=428, mean age (SD) of 74.2 (7.2), 285 (67%) female) with clinician confirmed GCA; diagnosed within the last three years or flaring within the last year. Patients completed the 40 candidate GCA-PRO items, the EQ5D-5L, CAT-PROM5 and self-report of disease activity. Rasch and factor analysis were used to determine internal validity and factor structure. Item reductions were based on clinical importance, Rasch model fit, and redundancy. Tests of validity included comparison of the GCA-PRO (i) in participants with 'active disease' versus patients 'in remission' (known groups validity) and (ii) with EQ5D-5L and CAT-PROM5 scores (convergent validity).

Results

After the initial analysis (40 items), ten items were deleted, and two response categories collapsed to ensure overall fit to the Rasch model. This resulted in a final PRO comprising a 30-item scale with a 4-response category structure. Factor analysis confirmed four factors (domains): Acute symptoms (8 items), Activities of daily living (7 items), Psychological (7 items) and Participation (8 items), all of which individually fitted the Rasch model (X^2 = 25.219, DF=24, p=0.394 including reliability [Person Separation Index, PSI=0.828]), (construct validity). Each domain correlated, at least moderately, with EQ5D-5L and CAT-PROM5 scores (Spearman's Correlation Coefficients 0.44 to 0.78) (convergent validity). The new GCA-PRO discriminated between patients with active disease and remission (known groups validity).

Conclusions

The 30-item GCA-PRO demonstrates internal and external validity in measuring health-related quality of life in people with GCA.