Efficient Screening for Depression in Epilepsy - A comparison of conventional and visual-analogue methods

Background
Depression is an important but under-diagnosed complication of epilepsy which impacts on seizure frequency and quality of life. Few studies have compared potentially suitable screening tools head-to-head.

Methods
We enrolled 266 consecutive attendees with a confirmed diagnosis of epilepsy at a specialised neurological epilepsy service in London and compared verbal self-report and visual analogue screening methods for depression. These included two generic depression scales (HADS, BDI-II), one epilepsy-specific scale (NDDI-E) and the visual-analogue scale Revised Emotional Thermometers. We used DSM-IV criteria for major depression and ICD-10 criteria for depressive episode as the reference standard.

Results
The tools performed with similar accuracy, ranging from B (good test) to A (excellent test) by ROC area. Against ICD-10 depression the optimal scales were HADS-T, BDI-II and NDDI-E. New visual-analogue scales, particularly the distress thermometer and the depression thermometer, had similar accuracy but superior efficiency due to the brevity of the tools themselves.

Whilst no test performed well in a case-finding role, several performed well as a rule-out initial step owing to high negative predictive value and specificity. In this role, the optimal conventional tools were HADS-D and NDDI-E and the optimal visual-analogue scales were the depression thermometer and the distress thermometer.

Significance
We suggest that the 6-item NDDI-E should be considered if a conventional scale is preferred and that the revised ET4 be considered if a visual-analogue method is required. Follow up examination and intervention, where indicated, is necessary for all those who screen positive on any measure as these are not intended as diagnostic tools.

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