

AN EYE-TRACKING ASSISTIVE DEVICE IMPROVES THE QOL FOR ALS PATIENTS AND REDUCES THE CAREGIVERS' BURDEN

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Amyotrophic lateral sclerosis (ALS) is a devastating neurodegenerative disease. In some cases, patients with ALS retain a normal level of consciousness but disease progression eventually results in generalized paralysis, which first impedes and then prevents oral communication. This communication obstacle can generate a great deal of stress for the patient, family, and caregiver. Here we ask whether the use of an eye-tracking assistive device can improve quality of life for ALS patients and relieve burden of their primary caregivers. Subjects were divided into two groups depending on whether they used ($n = 10$) or did not use ($n = 10$) an eye-tracking assistive device. We assessed patients' quality of life and severity of depression using the ALS Specific Quality of Life Instrument-Revised and the Taiwanese Depression Questionnaire, respectively. The Caregiver Burden Scale was used to assess the burden on caregivers. Our study shows that the eye-tracking assistive device significantly improved patients' quality of life, as compared with patients in the non-user group ($p < 0.01$). The assistive device also reduced the burden on caregivers ($p < 0.05$). This is likely resulted from improvement of patient's autonomy and more effective communication between patient and caregiver.