

HEREDODEGENERATIVE DISORDERS AUTOSOMAL RECESSIVE CEREBELLAR ATAXIAS

LONG-TERM FOLLOW-UP OF FRIEDREICH ATAXIA PATIENTS

The results of a long-term prospective follow-up of 104 Friedreich ataxia patients are reported from the Salpêtrière Hospital, Paris, and other centers in France. Patients were examined every 6 months for a median period of 5 years (range, 6 months to 7 years). Eighty-eight were treated with the antioxidant, idebenone and 16 declined. The neurologic status, evaluated using the International Cooperative Ataxia Rating Scale (ICARS) and a quantitative writing test, showed worsening even in patients treated with idebenone and especially in those with onset before age 15 years. The ataxia posture subscore increased faster in ambulant patients with shorter disease durations at baseline. In patients with long disease durations, the ICARS scores reached a plateau, and neurologic progression was underestimated. Oculomotor function evaluated by electro-oculography deteriorated slightly, and cardiac function evaluated by echocardiography, electrocardiography, and Holter monitor showed cardiac hypertrophy at baseline and significant decreases in left ventricular mass and ejection fraction at follow-up. Patients with severe neurologic impairment at baseline also had severe cardiac hypertrophy. Although cardiac hypertrophy decreased with treatment, cardiac function showed no improvement. (Ribai P, Pousset F, Tanguy M-L et al. Neurological, cardiological, and oculomotor progression in 104 patients with Friedreich ataxia during long-term follow-up. *Arch Neurol* April 2007;64:558-564). (Respond: Alexandra Durr MD, PhD, Institut National de la Sante et de la Recherche Medicale U679, Hopital de la Salpêtriere, Bd de l'hôpital 47, 75013 Paris, France).

COMMENT. All patients in this study had typical Friedreich ataxia (FA) with confirmed molecular diagnosis mapped to chromosome 9q13. FA is an autosomal recessive disease with onset between 5 and 25 years of age. The prevalence is estimated at 1/30,000 to 1/50,000 in most populations. Clinical manifestations include progressive limb and truncal ataxia, dysarthria, absent reflexes, Babinski signs, and impaired vibration and proprioceptive sense. Asymptomatic cardiac disease with left ventricular hypertrophy is present in 66% of patients, and nystagmus or fixation instability occur in 25%. FA with retained reflexes (FARR), a variant phenotype of FS, is reported in some families (Palau F et al. *Ann Neurol* 1995;37:359-362). The ICARS, with a possible maximum score of 100 and 4 subscores (posture, kinetic function, speech, and oculomotor dysfunction) that increase with severity, has interrater reliability but is not appropriate to evaluate progression of FA in patients with long disease duration.

CLINICAL PHENOTYPES OF AUTOSOMAL RECESSIVE ATAXIAS

An overview of the most common autosomal recessive cerebellar ataxias is presented by researchers at the UCLA Ataxia Center, Los Angeles. *Friedreich's ataxia-like syndromes* include FA (involving mitochondrial iron metabolism), ataxia with vitamin-E deficiency (vitamin E homeostasis), abetalipoproteinemia (lipoprotein metabolism), and Refsum's disease (peroxisomal disease). *FA-like with cerebellar atrophy syndromes*: late-onset Tay-