

Study examines blood markers, survival in patients with ALS

July 21 2014

The blood biomarkers serum albumin and creatinine appear to be associated with survival in patients with amyotrophic lateral sclerosis (ALS) and may help define prognosis in patients after they are diagnosed with the fatal neurodegenerative disorder commonly known as Lou Gehrig disease.

The median survival time of patients with ALS is 2 to 4 years from onset and 1 to 3 years from diagnosis. Therefore, there is a need to identify reliable biomarkers of ALS progression for clinical practice and pharmacological trials.

The authors examined blood markers at ALS diagnosis in a population-based group of patients (discovery cohort, n=712) in Italy and then replicated the findings in another group of patients (validation cohort, n=122) from an ALS tertiary center. The blood markers examined included total leukocytes, glucose, cholesterol, [albumin](#), [creatinine](#) and thyroid-stimulating hormones.

Serum albumin and creatinine levels were related to ALS survival in both sexes. Creatinine reflected muscle waste and albumin was related to inflammation. Lower albumin and creatinine levels are related to worse clinical function at diagnosis.

"Both creatinine and albumin are reliable and easily detectable blood markers of the severity of motor dysfunction in ALS and could be used in defining patients' prognosis at the time of diagnosis. Longitudinal

studies on the variations in [serum albumin](#) and creatinine levels and their relationships to clinical status will help determine whether and how these hematological factors vary during the progression of the disease," Adriano Chiò, M.D., of the Rita Levi Montalcini Department of Neuroscience, Torino, Italy, and colleagues wrote in their *JAMA Neurology* article.

More information: *JAMA Neurol.* Published online July 21, 2014.
[DOI: 10.1001/jamaneurol.2014.1129](https://doi.org/10.1001/jamaneurol.2014.1129)

Provided by The JAMA Network Journals

Citation: Study examines blood markers, survival in patients with ALS (2014, July 21) retrieved 26 April 2024 from
<https://medicalxpress.com/news/2014-07-blood-markers-survival-patients-als.html>

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