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## پوستر برتر کنگره بین المللی تهران

در کنگره بین المللی تهران که در مورخه 12و13و14 اردیبهشت ماه 97 برگزار شد

به عنوان پوستر برتر کنگره بین المللی برگزیده شد. **"نورولوژی و الکتروفیزیولوژی بالینی"** رمانی دانشکده علوم توانبخشی آقای امیر سالار توضیحی و خانم مهسا مهدیزاده به سرپرستیاستاد خانم فاطمه فکار با عنوان به گزارش روابط عمومی دانشکده علوم توانبخشی تبریز پوستر دانشجویان گفتارد

# Speech and Language Deficits in Amyotrophic Lateral Sclerosis

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## ABSTRACT

Neuropsychological investigations of amyotrophic lateral sclerosis patients have revealed variable results on specific tests, despite a similar overall cognitive profile of predominantly executive dysfunction with some evidence of memory impairment.

## INTRODUCTION

This review aimed to evaluate the cognition, swallowing, speech and language performance and errors of ALS.

## METHODS

We conducted a search in PMC, Science Direct and Neuroscience, PubMed databases. The present information is available reviewing the articles from 1996 to 2018 through the search of the resources.

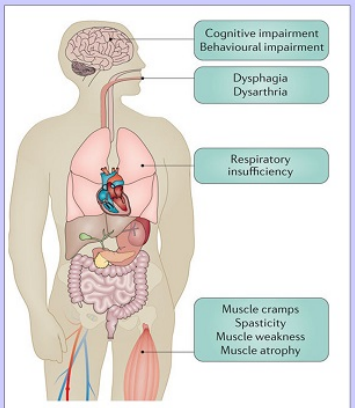

Figure1: Nature Reviews of ALS problems

## RESULTS

The amyotrophic lateral sclerosis (ALS) is a fatal neurodegenerative disease that covers a spectrum of syndromes characterized by progressive degeneration of lower and upper motor and produces a constellation of symptoms, including muscle weakness, wasting, fatigue, spasticity, cramps, muscle twitches, dysphagia, dysarthria, respiratory failure, and, in some patients, cognitive and mood changes. The disease is diverse in its presentation, cause and progression. It is also associated with declines in cognitive abilities, particularly those involving frontal and temporal lobe functions. The recent researches have shown that many problems have been seen in speech, language, swallowing and cognition skills. Numerous studies explored that the primary deficits in ALS occur in the domains of attention, executive functions, cognitive flexibility, word generation, retrieval and verbal fluency. Speech rate variability may be one of the first signs of speech disorder. There were significant deficiencies in the semantics of these individuals compared to the control group. The results indicate that accuracy and rate of production, intelligibility, speech quality controlling and grammatical capability can be reduced in almost all patients with ALS and in these patients, solids or liquids dysphagia occurs after speech problems. The studies show that there is association between these defects and white and gray matter abnormalities.

## CONCLUSIONS

The results indicate temporal deficits in ALS patients which leads to semantic and cognition problems and increasing frontal lobe and frontostriatal involvement, linguistic problems are increased. The findings indicate that verbal fluency impairments in ALS patients result from a higher order dysfunction, implicating deficits in the supervisory attentional system or central executive component of working memory, and are not caused or exaggerated by an impairment in phonological loop functions or in primary linguistic abilities.

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