

## Knowledge of Amyotrophic Lateral Sclerosis (ALS) in Pharmacy Students

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### Abstract

A motor neuron disease, known as (ALS) Amyotrophic lateral sclerosis in which neuronal muscles becomes atrophic. There is a loss of control of the brain on voluntary muscles occurs. Signs and symptoms of the disease vary according to the condition of a patient. There is no specific diagnostic test and treatment yet for this disease. Our survey aimed to find out its awareness among the university students of Karachi, Pakistan. Data of 50 university students was collected and analyzed. A cross-sectional and random method was used to collect data. Different questions were asked regarding the awareness of the disease among university students. Only 10% students have basic information regarding this disease. 2% students have information about the signs and symptoms, 2% students have information about the diagnosis, and 4% students have information regarding the treatment strategies of this motor neuron disease, Amyotrophic lateral sclerosis (ALS) in our survey. This survey proved that there is no awareness about ALS or only a negligible awareness among university students in the Karachi city. Even there were many students who heard this term "Amyotrophic lateral sclerosis (ALS)" first time in their lives.

**Keywords:** Motor neuron disease; Amyotrophic lateral sclerosis (ALS); Neuronal muscles; Atrophic; Voluntary muscles

### Introduction

A type of motor neuron disorder is Amyotrophic lateral sclerosis (ALS) or Lou Gehrig's disease [1]. It is a syndrome of progressive deterioration involving the brainstem, cortices, spinal tract, and anterior horn cells of the spinal cord. ALS developing risk is high between the ages of 50 years and 75 years [2]. Rather than a single disease entity, ALS is considered a syndrome due to its indication of heterogeneity in phenotype, genetic predisposition, and pathological substrate in clinical, pathological and genetic advances [3]. On the basis of site of onset, disease phenotype is classified. Limb symptoms are present in approximately 65% of patients, whereas 30% of patients have symptoms of bulbar dysfunction in the form of dysphagia or dysarthria. There is also a respiratory-onset disease experienced by 5% of the ALS patients [3]. Initially weight loss symptoms have also been reported [4]. Up to 25% of patients with ALS have evidence of cognitive impairment, mainly executive dysfunction, and frontotemporal dementia is experienced by 15% of patients [3]. The clinical and pathogenic overlap between ALS and some other neurodegenerative diseases tends to support the hypothesis that a shared environmental and genetic susceptibility underlies some neurodegenerative phenotypes [5].

### Diagnosis

No definitive diagnostic test for ALS exists. The combination of suggestive clinical signs with negative laboratory tests and imaging studies for other pathologies supports the diagnosis. The diagnosis is established by excluding other causes of progressive upper motor neuron and lower motor neuron dysfunction [3].

### Treatments

Riluzole is the only drug proven to modify the ALS, and to improve the survival. Clinical care is based on symptom management. Further improvements in survival will depend on advances in understanding the origins and spread of this syndrome. Symptom control and preservation of quality of life remain the cornerstones of management for patients with ALS.

### Aim of Study

There are several cases reported in Pakistan therefore we have to decide to check the awareness of this disease and also by this we can give information to health care professionals regarding the disease.

The basic aim of this study is to check the awareness about this disease and by compiling all information regarding ALS in this paper is very useful for the health care profession. We have done this type of surveys and by reading these research articles, students of Pharm D and MBBS will be well aware of this disease [6-12].

### Methodology

This is a survey-based study on the awareness of Amyotrophic lateral sclerosis (ALS). A cross-sectional and random method was used to collect data from university students about the knowledge of Amyotrophic lateral sclerosis (ALS) in the month of May-June, 2014 in Karachi city. A specially designed questionnaire was used for data collection. Data of 50 students (n=50) was collected and analyzed. Different questions were asked from the subjects to collect the data to conclude the awareness rate in university students about ALS. Questions were asked on the knowledge, signs and symptoms, diagnosis and treatment strategies of ALS.

## Data Analysis

We have used tables and graphs for analysis of our data obtained. All the data were analyzed in SPSS version 19. The questions asked from students are given below.

What is Amyotrophic lateral sclerosis (ALS)?

How can we diagnose (ALS)?

What are the signs and symptoms?

What are the treatments for (ALS)?

## Result

According to our survey on the awareness of Amyotrophic lateral sclerosis (ALS) the knowledge about ALS in university students of Karachi city is found very less. Only 5 out of 50 university students have knowledge about ALS, only a single student was there who know about the signs and symptoms and diagnosis of ALS out of 50 students. There were 2 students who know about the treatment strategies of ALS.

## Discussion

In our survey on the awareness of a motor neuron disease, Amyotrophic lateral sclerosis (ALS) among the university students, different questions were asked from 50 students (n=50). Four questions asked from subjects to check their knowledge level about the ALS.

Frequency		Percent	Valid Percent	Cumulative Percent
no	45	90.0	90.0	90.0
yes	5	10.0	10.0	100.0
Total	50	100.0	100.0	

Table 1: Knowledge about ALS.

		Knowledge	Sign symptoms	Diagnosis	Treatment
N	Valid	50	50	50	50
	Missing	0	0	0	0
Mean		.1000	.0200	.0200	.0400
Std. Error of mean		.04286	.02000	.02000	.02799
Median		.0000	.0000	.0000	.0000
Mode		.00	.00	.00	.00
Std. Deviation		.30305	.14142	.14142	.19795

Table 5: Statistics of participant.

There were 2 equal probabilities to answer either yes or no. Tables 1-4 give results of ALS awareness regarding term, diagnosis treatment, etc. and Table 5 shows statistic of these groups. Figures 1-4 shows results of awareness.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	49	98.0	98.0	98.0
	yes	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Table 2: Knowledge about sign symptoms of ALS.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	49	98.0	98.0	98.0
	yes	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

Table 3: Knowledge about diagnosis of ALS.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	48	96.0	96.0	96.0
	yes	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Table 4: Knowledge about Treatment of ALS.

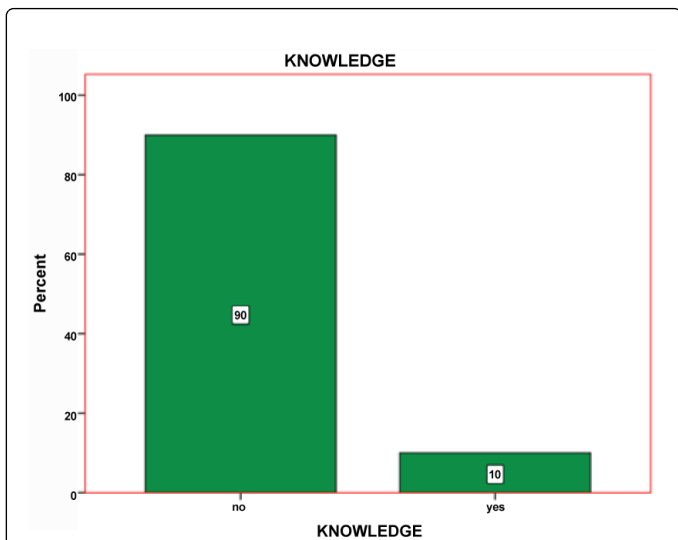


Figure 1: Knowledge about ALS.

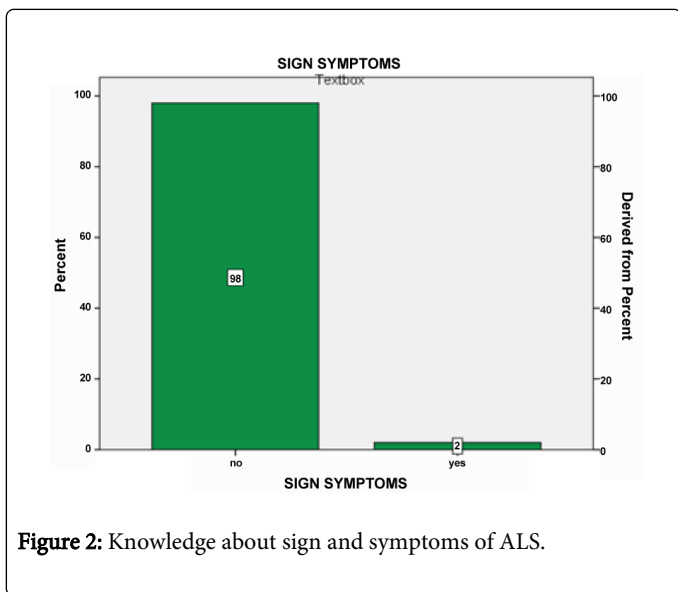


Figure 2: Knowledge about sign and symptoms of ALS.

In our survey the first question was asked about the basic knowledge regarding the disease Amyotrophic lateral sclerosis. This question was asked from 50 university students. 45 out of 50 university students have no basic information about this motor neuronal degenerative disease. Even some students heard this term first time in their lives. There were only 5 university students in our survey of 50 students who have information regarding ALS.

The next question in our survey was asked about the signs and symptoms regarding the disease Amyotrophic lateral sclerosis. This question was asked from 50 university students. 49 out of 50 university students have no information about the signs and symptoms of this motor neuronal degenerative disease. There was only a single university student in our survey of 50 students who have information regarding the signs and symptoms of ALS.

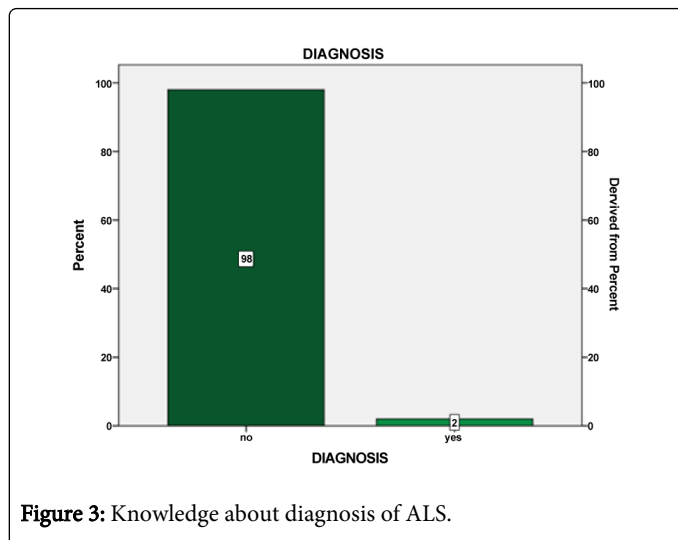


Figure 3: Knowledge about diagnosis of ALS.

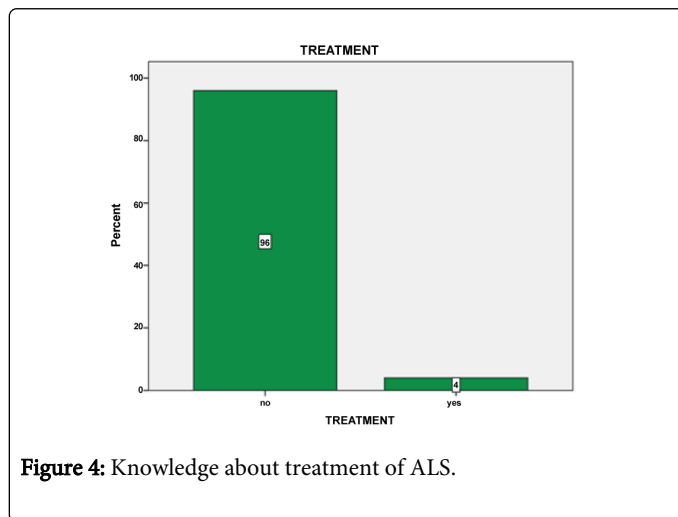


Figure 4: Knowledge about treatment of ALS.

The next question in our survey was asked about the diagnosis of disease Amyotrophic lateral sclerosis. This question was asked from 50 university students. There is no way yet to diagnose the ALS directly so 49 out of 50 university students have no information about the diagnosis of this motor neuronal degenerative disease. There was only a single university student in our survey of 50 students who have information regarding the series of diagnostic tests of ALS.

The last question in our survey was asked about the treatment strategies of disease Amyotrophic lateral sclerosis. This question was asked from 50 university students. There is no cure of ALS, treatment may help to relieve the symptoms and keep the patient calm and comfortable. 48 students out of 50 university students have no information about the treatment strategies of this motor neuronal degenerative disease. There were only a pair of university student in our survey of 50 students who have information regarding the treatment strategies of ALS. These types of awareness studies helpful for medical student about disease, symptoms, treatment and precaution etc [6-12].

## Conclusion

After our survey regarding the awareness of ALS, we find there is only negligible awareness in the university students about this disease. Therefore we concluded that the knowledge of ALS in student is not enough to dial uncertain mishap of the ALS & they must aware to the ALS to treat others more better.

## Acknowledgement

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