Amyotrophic Lateral Sclerosis (ALS)

Care & Ventilation

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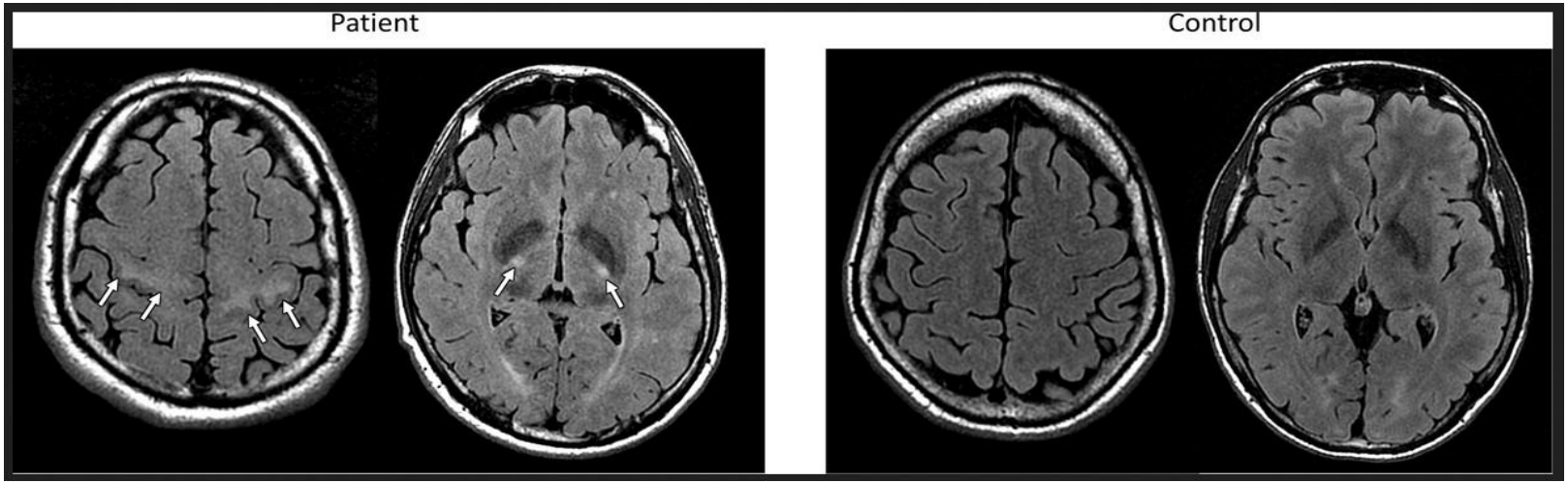
What is ASL?

- ASL is a progressive condition whereby an individual loses nerves that control movement (Radunovic et al., 2017).
- The cause of ALS is unknown but some evidence point to genetics.
- Specific risks that accelerate it include age, environmental toxin exposure, smoking, age, and military service (Mayo Clinic, 2021).

MRI Scan image of ASL



- The manifestation of ASL through hyper intensity on an MRI scan
- Source: Mazon et al., (2018)

Key Statistics about ASL

Prevalence in US

- **6,000**: Number of Americans diagnosed with ASL annually.
- **30,000**: Number of Americans with ASLO today

Common Demographic

- 40-70 year olds

Post-diagnosis survival rates

- **20%**: Live for up to 5 years.
- **10%**: Live for up to 10 years.

ALS ASSOCIATION

Data Source: ASL Association cited by Hanlon (2017)

Common Signs & Symptoms

General Symptoms

- Difficulties in walking
- Weaknesses in legs and hands
- Tripping and falling
- Slurred speech
- Difficulty in swallowing food
- Muscle cramps, and twitching
- Minimal or no pain experienced among patients.

(Mayo Clinic, 2021)

Symptoms due to muscle respiratory failure:

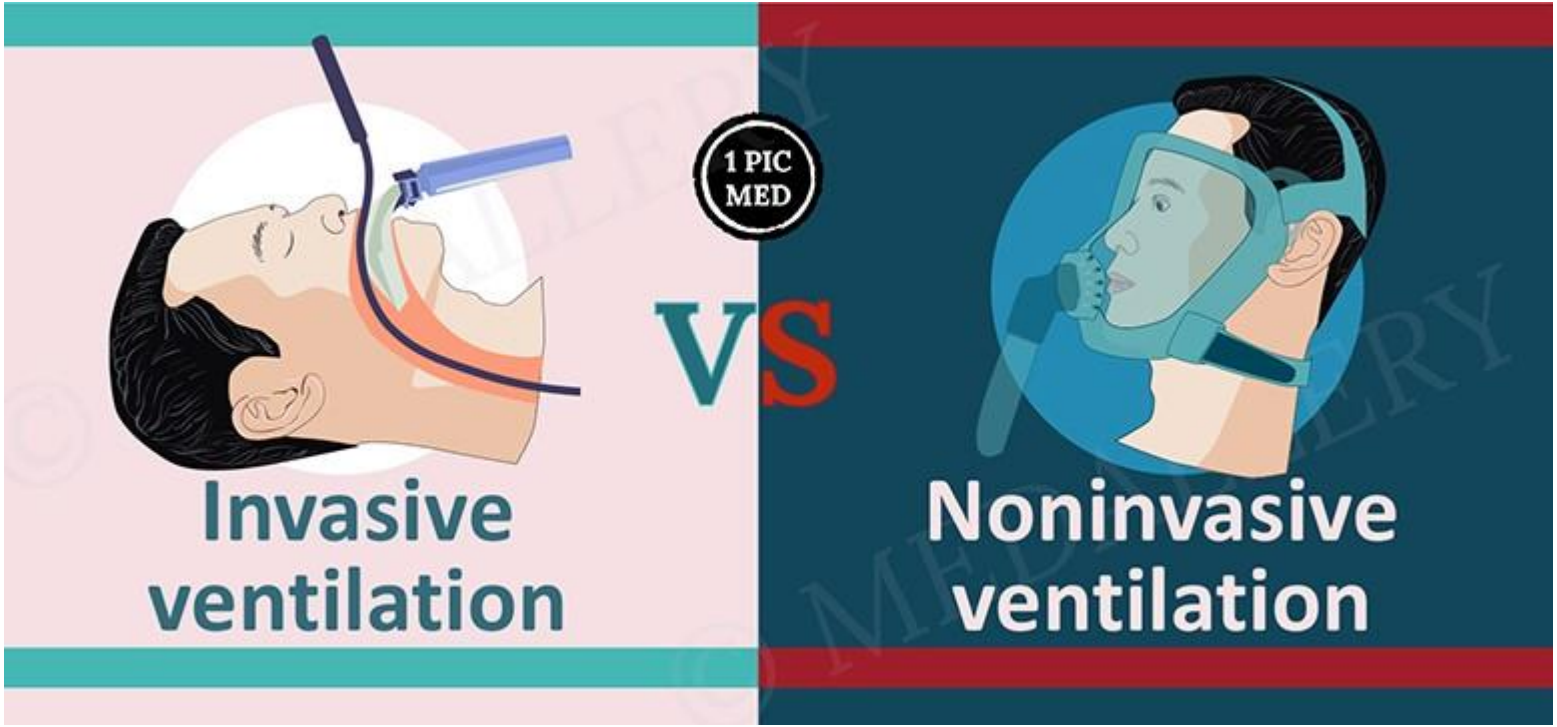
- Supine dyspnea
- Fatigue
- Dyspnea with mild exertion
- Depression
- Weight loss
- Insomnia.

(Gilani et al., 2021)

Is ASL Treatable?

- No, there are no known treatment for the disease with regular medications to manage the conditions.

Ventilation Approaches



Mechanically assisted invasive ventilation (MAIV)

- It is less recommended because of the life-threatening complications associated with it.

- Some of the risks associated with MAIV include alveolar damage, injury to the airways, ventilator-associated pneumonia, and tracheobronchitis (Brochard, 2003; Pinto, 2013).

- A more in-depth evaluation is required to ascertain its effectiveness in the care of patients with ASL.

Non-invasive Ventilation (NIV)

- Elongates the patient's survival and ensure better quality of life (Radunovic et al., 2017).
- Longer patient survival and quality of life but dependent on how best ventilation and adherence are optimized (O'Brien et al., 2019).
- Effective in compensating for diaphragm weakness, alleviating hypercapnic symptoms, and enhancing general conditions of wellness (Dorst and Ludolph, 2019).
- Recommended: Safer and lesser risks to patients with ASL.

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