Deanna Protocol Metabolic Therapy in Treatment of Amyotrophic Lateral Sclerosis

Winning the Fight Against Neurodegenerative Diseases

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BACKGROUND

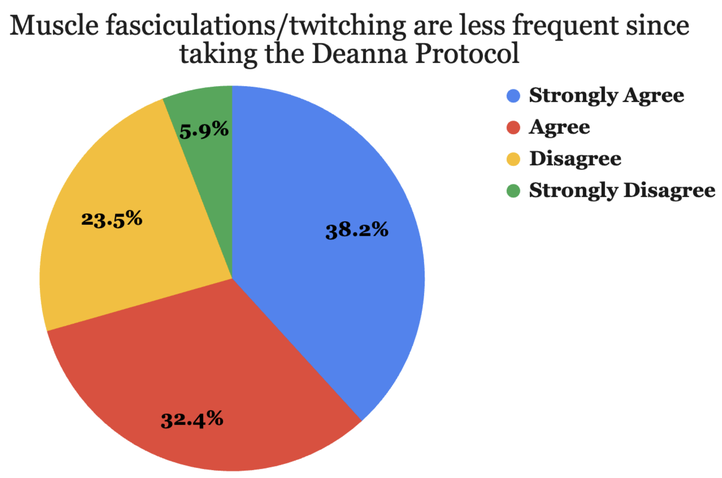
Amyotrophic lateral sclerosis (ALS) also known as Lou Gehrig's Disease is a progressive disease of **neuronal degeneration** in the spinal cord, brainstem and motor cortex that results in impaired motor functioning.

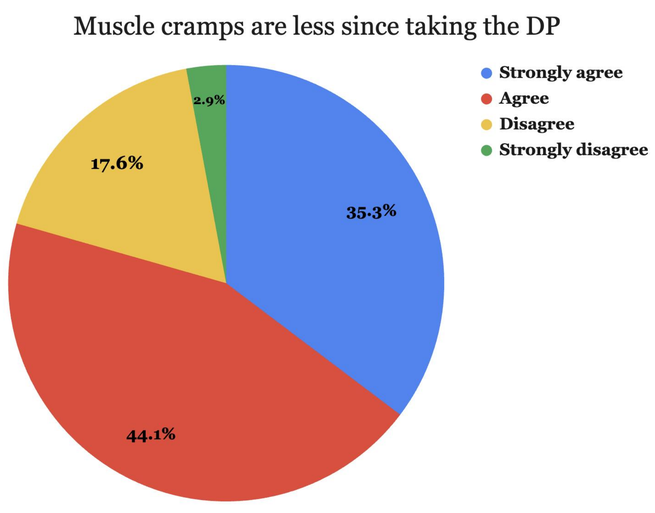
The cause of ALS can be multi factorial but the pathogenesis is the same the cell lacks energy and loses the capacity to produce an action potential and hence stops cells from communicating via Synapse and NMJ. Micro Pathologically this is expressed by abnormal Tau and swelling of the microtubules. Clinically several physicians have documented positive serology for borrelia. ..

With the exception of retroviruses the only pathogen so far that has been shown to stop cell energy production is borrelia which occurs by two modalities. It co-opts the host TCA cycle or attaches to the host cell membrane blocking the ingress of nutrients
Since borrelia is transplacental and sexually transmitted Many are colonized with the latent borrelia. Examples of this are Deanna and the Chinese dry wall in her renovated house
High incidence of ALS in the first gulf war veterans. Oil well fires polluted the air with fossil fuels.
Increased incidence of ALS n airline pilots due to fossil fuels.
Athletes who play on grass treated with insecticides high incidence of ALS
CTE post-concussion. mRNA vaccines and neuroborreliosis. And many more examples of toxins plus increased incidence of neurological Sx.

This is a retrospective, observational case series consisting of a questionnaire sent out to DP consumers who had consistently bought and used the Deanna Protocol for >1 year. All data was de-identified and entered in an excel spreadsheet. Inclusion criteria consisted of only confirmed ALS patients taking the adequate dose (2-3 scoops per day; 2g per scoop). Thirty-four ALS patients reported their subjective assessments on a scale of strongly disagree to strongly agree of how their muscle twitches, fasciculations and cramps have improved since taking the Deanna Protocol.

RESULTS



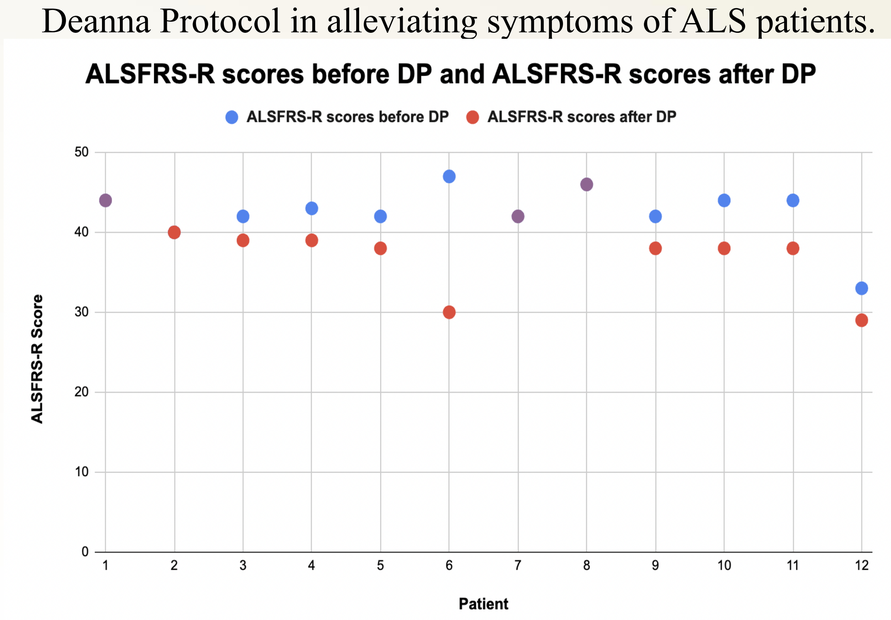


INTRODUCTION

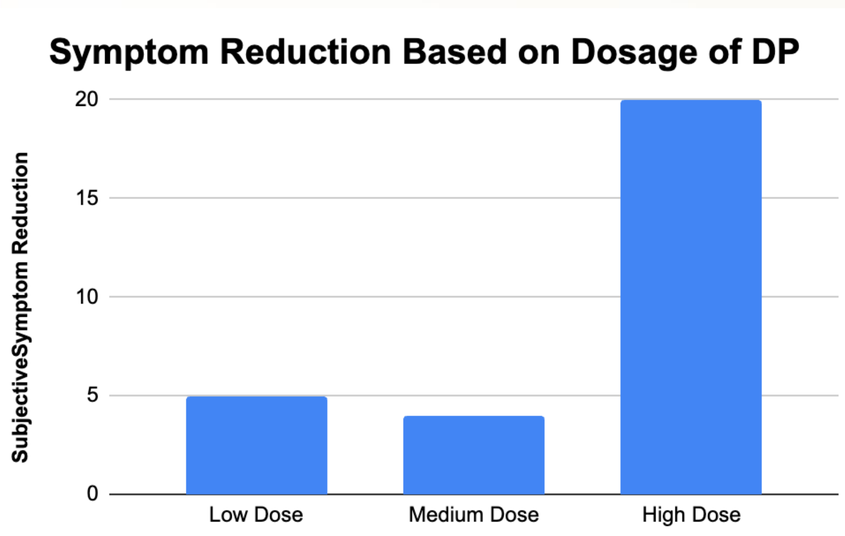
Along with motor neuron degeneration, ALS is associated with impaired energy metabolism that is linked to mitochondrial dysfunction and glutamate excitotoxicity.

Deanna Tedone was a 30-year-old newlywed with a baby on the way whose life was turned upside down when her ALS began to take over. Her father, Dr. Vince Tedone, worked tirelessly to research medical therapy for ALS, and arrived at a metabolic therapy he then called the "Deanna Protocol." The Deanna Protocol (DP) has been reported to help alleviate motor symptoms in ALS patients. DP was initially composed of a mixture of four commercially available dietary supplements: arginine-alpha-ketoglutarate (AAKG), MCT oil, β-phenyl-GABA, and coenzyme Q10. However research on human ALS cells revealed better results when only AAKG and GABA in proprietary proportions were used. AKG is an important alternative fuel in the form of TCA cycle intermediates and helps preserve metabolic function and GABA helps prevent glutamate excitotoxicity. Arginine is added to balance the strong acid AKG and make the DP palatable. Previous pre-clinical studies in ALS mice (SOD1-G93A) have demonstrated that the DP protocol reduced progression of ALS pathology (Ref. 1,2, 3).

In this preliminary case series study, we investigate the effectiveness of the Deanna Protocol in alleviating symptoms of ALS patients.



All 12 patients with reported ALSFRS-R score reported either decreased or no change in their score after using the Deanna Protocol. The rate of decrease in ALSFRS-R score is less than what is expected based on historical data (Proudfoot, 2016).



Low Dose of DP is classified as one scoop of DP per day, while high dose of DP is at least 3 scoops per day. Subjective assessment of symptom reduction was based on the patients' responses of "strongly agree, agree, no difference etc." normalized to +2, +1, 0, -1, etc.

CONCLUSIONS

Preliminary data in this clinical case series has shown that DP-treated pALS (n=34) reported less muscle twitches, fasciculations and cramps. Specifically, our questionnaire results indicated **70.6% of all pALS "strongly agreed" or "agreed" in a significant reduction of their muscle fasciculations** while using the DP.

In 90% of ALS patients using the DP there was <**10 point drop** in ALSFRS-R score. Historically, ALSFRS-R score drops > 10 points/year (Proudfoot, 2016). Further research is needed to validate this trend.

In conclusion, we have previously shown that targeting mitochondrial function and glutamate excitotoxicity with DP supplementation reduces disease progression in ALS mice (1,2,3), and this retrospective study supports the therapeutic benefit of the DP in improving motor function and ALFRS-R scores in ALS patients

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3. Ari, C., Poff, A.M., Held, H.E., Landon, C.S., Goldhagen, C.R., Mavromates, N., **D'Agostino, DP**. Metabolic therapy with Deanna Protocol Supplementation Delays Disease Progression and Extends Survival in Amyotrophic Lateral Sclerosis (ALS) Mouse Model. *PLoS One.* 2014 Jul 25;9(7):e103526. DOI: 10.1371/journal.pone.0103526