**DD SIG Episode 44: Spinal Muscular Atrophy with Kyle Reedy**
In this first installment of our series on rare neurologic diseases, host Jeff Schmidt talks with Kyle Reedy about Spinal Muscular Atrophy (SMA). Kyle discusses the etiology and clinical presentation of this disease, as well as best practices for treating patients living with this rare neuromuscular disease, in light of medical advances that have improved patient prognosis. From using SMA-specific outcome measures to advocate for patients to insurance companies, to designing comprehensive and tailored interventions to optimize function and mobility long term, Kyle delves into the research and interdisciplinary best practices for management of patients with SMA.

The Degenerative Diseases Special Interest Group is part of the Academy of Neurologic Physical Therapy – www.neuroPT.org

**Guest Information**
Kyle Reedy, PT, DPT, NCS
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**4 Key Moments:**
4:00 - Kyle discusses the etiology of Spinal Muscular Atrophy, clinical presentation and classification of the disease, and what the current outlook is for people with this rare disease.

12:36 - Jeff asks Kyle to discuss the changing role of physical therapists in the management of this patient population, particularly in light of recent medical advances that have improved the prognosis for patients with this disease.

15:54 - Kyle talks about the nuances of creating individualized treatment plans for patients with SMA based on their disease classification and clinical presentation. He also discusses the latest research on SMA and best practices for clinicians.

29:30 - Kyle discusses clinical translation and key takeaways for physical therapists treating patients with SMA.

**For More Information on Spinal Muscular Atrophy:**
Cure SMA: https://www.curesma.org/
Muscular Dystrophy Association: https://www.mda.org/disease/spinal-muscular-atrophy
CDC: https://www.cdc.gov/nceh/dls/nsmbb_sma.html

**SMA Outcome Measures:**
Revised Hammersmith Scale (RHS)
Revised Upper Limb Module
MFM-32
CHOP INTEND (Children's Hospital Of Philadelphia Infant Test Of Neuromuscular Disorders) - SMAUK

**Related articles:**
Agyenkwa, S. K., Cibooğlu, P., Jhar, N., Abo Orabi , A., & Mustafaoglu, R. (2023). Rehabilitation in Spinal Muscular Atrophy; A Narrative Review. European Journal of Therapeutics, 29(3), 656–666. https://doi.org/10.58600/eurjther1516

Bartels B, Montes J, van der Pol WL, de Groot JF. Physical exercise training for type 3 spinal muscular atrophy. Cochrane Database Syst Rev. 2019 Mar 1;3(3):CD012120. doi: 10.1002/14651858.CD012120.pub2. PMID: 30821348; PMCID: PMC6396106.

Coratti G, Cutrona C, Pera MC, Bovis F, Ponzano M, Chieppa F, Antonaci L, Sansone V, Finkel R, Pane M, Mercuri E. Motor function in type 2 and 3 SMA patients treated with Nusinersen: a critical review and meta-analysis. Orphanet J Rare Dis. 2021 Oct 13;16(1):430. doi: 10.1186/s13023-021-02065-z. PMID: 34645478; PMCID: PMC8515709.

Lewelt A, Krosschell KJ, Stoddard GJ, Weng C, Xue M, Marcus RL, Gappmaier E, Viollet L, Johnson BA, White AT, Viazzo-Trussell D, Lopes P, Lane RH, Carey JC, Swoboda KJ. Resistance strength training exercise in children with spinal muscular atrophy. Muscle Nerve. 2015 Oct;52(4):559-67. doi: 10.1002/mus.24568. PMID: 25597614; PMCID: PMC4506899.

Mercuri, E., Finkel, R. S., Muntoni, F., Wirth, B., Montes, J., Main, M., Mazzone, E. S., Vitale, M., Snyder, B., Quijano-Roy, S., Bertini, E., Davis, R. H., Meyer, O. H., Simonds, A. K., Schroth, M. K., Graham, R. J., Kirschner, J., Iannaccone, S. T., Crawford, T. O., … Szlagatys-Sidorkiewicz, A. (2018). Diagnosis and management of spinal muscular atrophy: Part 1: Recommendations for diagnosis, rehabilitation, orthopedic and Nutritional Care. *Neuromuscular Disorders*, *28*(2), 103–115. https://doi.org/10.1016/j.nmd.2017.11.005

Yi, Y. G., Shin, H.-I., & Jang, D.-H. (2020). Rehabilitation of spinal muscular atrophy: Current consensus and future direction. Journal of Genetic Medicine, 17(2), 55–61. https://doi.org/10.5734/jgm.2020.17.2.55