

Cauda Equina Syndrome:

An introduction

Participant Objectives

- I. Refresh anatomy and physiology of:
Brain, Spine, Central Nervous System, Peripheral Nervous System, and the Cauda Equina

References:

1. Tortora, Gerard J., and Sandra R. Grabowski. "12-13." *Principals of Anatomy and Physiology*, 10th ed., Wiley, 2002.

- II. Participants will be able to define CES, define types of CES, understand differences between Acute and Chronic CES, and understand the limitations of current research in these areas

Reference:

1. International standards for neurological classification of spinal cord injury (Revised 2011). Steven C. Kirshblum., Stephen P. Burns, Fin Biering-Sorensen, William Donovan, Daniel E. Graves, Amitabh Jha, Marck Johansen, Linda Jones, Andrei Krassioukov, M.J. Mulcahey, Mary Schmidt-read & William Waring. *The journal of Spinal Cord Medicine*. Vol. 34, Iss. 6, 2011.
2. Clinical Classification of cauda equina syndrome for proper treatment. Jiangang Shi, Lanshun Jia, Wen Yuan, GouDong Shi, Bin Ma, Bo Wang & JianFeng Wu. *Acta Orthopaedica*. Vol. 81, Iss. 3, 2010
3. Cauda Equina Syndrome- The Prelude to an Evidence-Based Scoring System
Badge, Ravi et al. *The Spine Jornal*, Volume 15, Issue 3, S54, 2015

- III. Participants will be able to recognize CES RED FLAG Symptoms for differential diagnosis and advocate for the patient care

Reference:

1. Clinical Classification of cauda equina syndrome for proper treatment. Jiangang Shi, Lanshun Jia, Wen Yuan, GouDong Shi, Bin Ma, Bo Wang & JianFeng Wu. *Acta Orthopaedica*. Vol. 81, Iss. 3, 2010

2. Cauda Equina Syndrome- The Prelude to an Evidence-Based Scoring System
Badge, Ravi et al. The Spine Journal, Volume 15, Issue 3, S54, 2015

IV. Participants will know appropriate tests, evaluation, and physical for suspected CES to be better patient advocates

References:

1. British Association of Spine Surgeons standards of care for cauda equina syndrome
Germon, Timothy et al. The Spine Journal, Volume 15, Issue 3 , S2 - S4
2. Cauda Equina Syndrome – The Prelude to an Evidence-Based Scoring System
Badge, Ravi et al. The Spine Journal, Volume 15, Issue 3 , S54

V. Participants will know importance of proper and timely diagnosis to be better patient advocates

Reference:

1. British Association of Spine Surgeons standards of care for cauda equina syndrome
Germon, Timothy et al. The Spine Journal, Volume 15, Issue 3 , S2 - S4
2. Cauda Equina Syndrome – The Prelude to an Evidence-Based Scoring System
Badge, Ravi et al. The Spine Journal, Volume 15, Issue 3 , S54
3. Fuso FAF, Dias ALN, Letaif OB, Cristante AF, Marcon RM, Barros Filho TEP.
Epidemiological study of cauda equina syndrome. Acta Ortop Bras. [online].
2013;21(3):159- 62. Available from URL: <http://www.scielo.br/aob>.
4. Redundant nerve root syndrome of the cauda equina: the benefits of 3D CISS MRI
sequence Nayman, Alaaddin et al. The Spine Journal , Volume 15 , Issue 10 , e31, 2015

VI. Participants will understand legal and patient quality of life ramifications for misdiagnosis to be patient advocates and to protect themselves from legal ramifications and their patients quality of life

Reference:

1. Bharuka, Anuj D., Rajendra Phunde, and Hiren B. Patel. "Evaluation of relationship between timing of surgery and functional outcome considering the extent of neurological deficit in patients with cauda equina syndrome secondary to lumbar disc herniation." *International Journal of Research in Orthopaedics* 3.5 (2017): 998-1003.
2. *Ayers v. Parry*, 192 F.2d 181 (3d Cir. 1951).
3. *Tom v. Sundaresan*, 107 A.D.3d 479, 966 N.Y.S.2d 434 (App. Div. 2013).
4. *Keesler v. Small*, 140 A.D.3d 1021, 35 N.Y.S.3d 356 (App. Div. 2016).
5. *Pracht v. Colvin*, No. 14-1403-JAR (D. Kan. Jan. 7, 2016).

- VII. Participants will understand recommended treatment for individuals newly diagnosed to be patient advocates

Reference:

1. British Association of Spine Surgeons standards of care for cauda equina syndrome
Germon, Timothy et al. The Spine Journal, Volume 15, Issue 3 , S2 - S4
2. Cauda Equina Syndrome – The Prelude to an Evidence-Based Scoring System
Badge, Ravi et al. The Spine Journal, Volume 15, Issue 3 , S54

- VIII. Participants will understand the needs of the CES patient pre-surgical, during hospitalization, and discharge needs to better advocate for the patients' needs

We represent almost 2,000 CES patients, this portion of the lecture is their voice. What they want you to know from their life experiences with CES. What they wish their healthcare providers told them before they went home. Also, what DME equipment they wish they knew about when they went home. This will allow healthcare practitioners to advocate for equipment to improve functionality and independence at home after discharge.