Training session effect on International Standards for Neurological Classification of Spinal Cord Injury classification accuracy

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BACKGROUND

• Successful utilization of the International Standards for Neurological Classification of Spinal Cord Injury (ISNCSCI) requires a comprehensive understanding of its rules and nuances.
• Low accuracy rates in ISNCSCI classification have been reported with common errors identified.
• Formal ISNCSCI training has been shown to improve classification accuracy.
• The 2019 ISNCSCI updates introduced challenging concepts (i.e. documentation of non-SCI conditions and revised definition of the zone of partial preservation (ZPP)).
• No studies have evaluated classification accuracy or the effectiveness of ISNCSCI training since the 2019 changes.

STUDY OBJECTIVE

• Assess the effect of an ISNCSCI training session on classification accuracy and common errors and classification challenges.

DESIGN & METHODS

• Pre-to-post test comparison study
• Virtual 4-hour pre-conference workshop on ISNCSCI classification was held at the 2021 ASCIP annual meeting.
• 13 course attendees completed pre- and post-training assessments consisting of 6 classification cases, each with 11 variables (right/left sensory level, right/left motor level, neurological level of injury (NLI), completeness, ASIA Impairment Scale (AIS) grade, and right/left sensory and motor ZPP).
• Included 2 cases with non-SCI conditions (example seen in Figure 1) to evaluate accurate application of 2019 ISNCSCI updates.

RESULTS

• Accurate total mean pre- and post-test accuracy was 69% and 88%, respectively (p=0.001).
• Mean score increases were demonstrated in each ISNCSCI variable category (Figure 2).
• The greatest percentage of pre-test errors was related to ZPP (35% sensory, 26% motor), followed by AIS grade (10%).
• Two cases involved non-SCI conditions and these cases had the lowest pre-test mean scores (61% and 65%).

CONCLUSIONS

• Accurate ISNCSCI classification is essential for clinical and research applications (i.e. clinical trial eligibility).
• This study highlights classification challenges and demonstrates the utility of educational training sessions to improve ISNCSCI accuracy.

REFERENCES

5. Lilley C, Negri LA. The complexity of classification of SCI conditions and these cases had the lowest pre-test mean scores (61% and 65%).