



Design and evaluation a comprehensive patient-reported outcome measure for patients with Neurogenic Lower Urinary Tract Dysfunction

Shangzhen Geng, Benkang Shi, Yan Li
Qilu hospital of shandong university

ABSTRACT

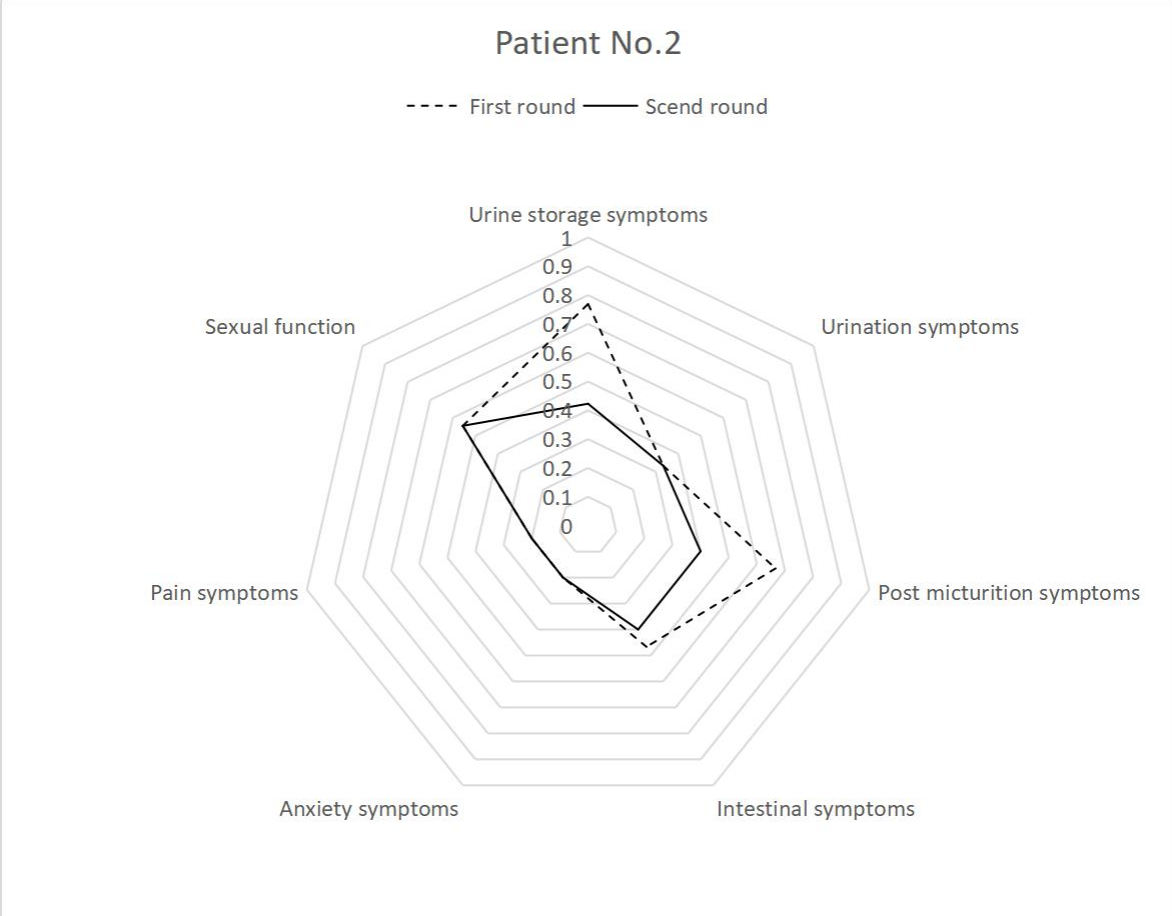
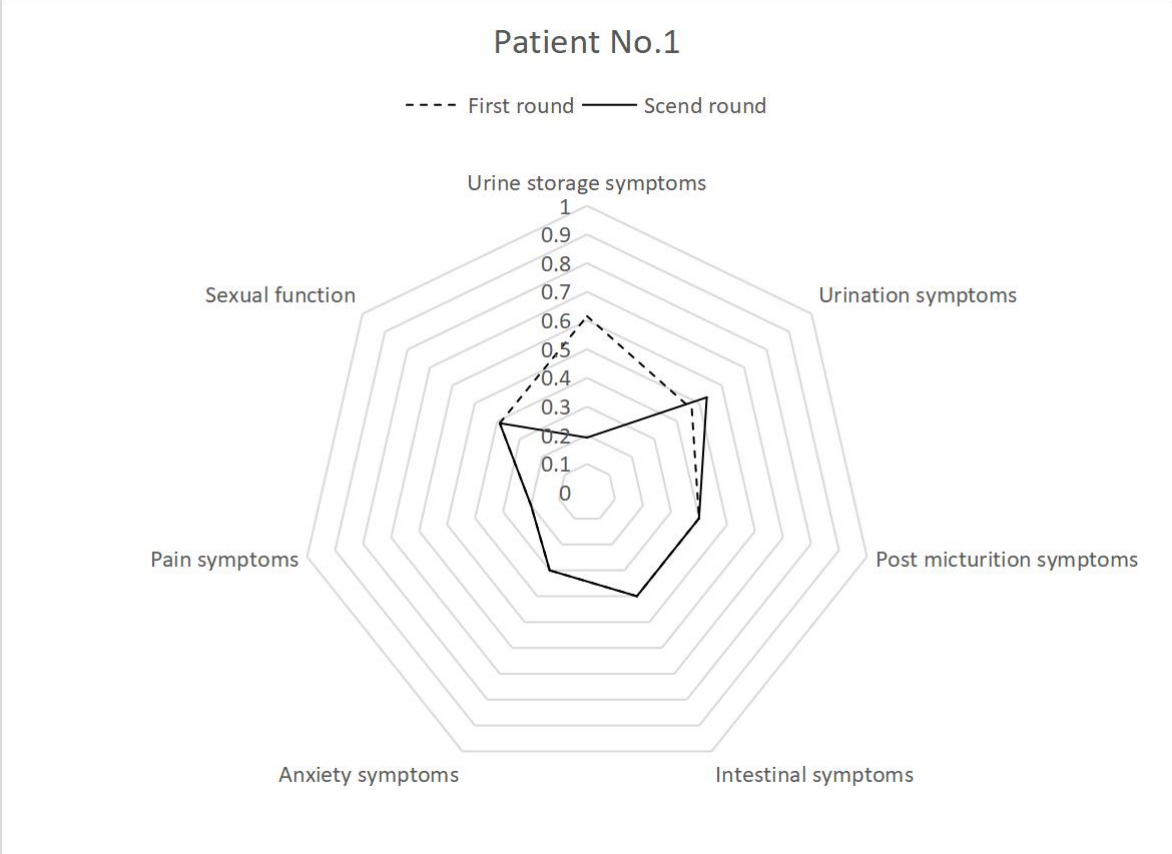
Patients with Neurogenic Lower Urinary Tract Dysfunction (NLUTD) often associate with other problems, such as bowel dysfunction, sexual dysfunction, and psychological disorders. Until now, there is no instrument for comprehensive evaluation of these symptoms in patients with NLUTD. This study aims to design and evaluate a comprehensive patient-reported outcome measure for patients with NLUTD.

METHODS

Based on literature review and opinions of the patients, professionals and experts, a draft questionnaire was generated. This newly designed questionnaire included seven domains including urine storage symptoms, urination symptoms, post micturition symptoms, intestinal symptoms, anxiety symptoms, pain symptoms and sexual symptoms. Patients with NLUTD were recruited to complete the questionnaire. The critical ratio method was used to assess the program quality. Cronbach’s alpha and test-retest reliability were used to test the reliability of the scale. Exploratory factor analysis, the content validity index, the content validity ratio, kappa statistics and concurrent validity were used to test the validity of the questionnaire.

RESULTS

A comprehensive neurogenic lower urinary tract dysfunction scale (CNLUTDS) was designed and evaluated. Ninety patients completed the questionnaire twice. It demonstrated good internal consistency (Cronbach’s alpha =0.762), test–retest stability (0.825–0.992), and validity (Kaiser-Meyer-Olkin=0.727, content validity index≥0.89, content validity ratio≥0.78, and kappa statistics≥0.89). The questionnaire results were presented as a radar chart to allow better visualization of the changes in the patients’ symptoms.



CONCLUSIONS

The CNLUTDS is a novel patient-reported outcome measure that can be used to comprehensively assess changes in patients’ symptoms with strong reliability, validity, and convenience.

REFERENCES

- 1.Perez NE, Godbole NP, Amin K, Syan R, Gater DR, Jr. Neurogenic Bladder Physiology, Pathogenesis, and Management after Spinal Cord Injury. J Pers Med. 2022;12(6).
- 2.Ginsberg DA, Boone TB, Cameron AP, Gousse A, Kaufman MR, Keays E, et al. The AUA/SUFU Guideline on Adult Neurogenic Lower Urinary Tract Dysfunction: Treatment and Follow-up. J Urol. 2021;206(5):1106-13.
- 3.Goldstine J, Knox K, Beekman J, Cobussen-Boekhorst H, Conti A, Gray M, et al. A Patient-Centric Tool to Facilitate Goal Attainment Scaling in Neurogenic Bladder and Bowel Dysfunction: Path to Individualization. Value Health. 2021;24(3):413-20.
- 4.Lombardi G, Musco S, Kessler TM, Li Marzi V, Lanciotti M, Del Popolo G. Management of sexual dysfunction due to central nervous system disorders: a systematic review. BJU Int. 2015;115 Suppl 6:47-56.
- 5.Mustač F, Pašić H, Medić F, Bjedov B, Vujević L, Alfirević M, et al. Anxiety and Depression as Comorbidities of Multiple Sclerosis. Psychiatria Danubina. 2021;33(Suppl 4):480-5.
- 6.Tulsky DS, Kisala PA. The Spinal Cord Injury--Quality of Life (SCI-QOL) measurement system: Development, psychometrics, and item bank calibration. J Spinal Cord Med. 2015;38(3):251-6.