

Nov. 15, 2022

Re: Submission of a Revised manuscript to the *World Journal of Clinical Cases*

Dear Editors and Editorial Committee,

Thank you very much for giving us the opportunity to revise our invited review (Manuscript number: 80086)

We would be grateful for the consideration of our revised manuscript “Rehabilitation care of patients with neurogenic bladder after spinal cord injury: a literature review” (by Lei Xiang, Han Li, Qi-Qi Xie, Ching Sin Siau, Zhi Xie, Mengting Zhu, Bo Zho, Zhipeng Li and Shuaibin Wang) for publication in the *World Journal of Clinical Cases*. The authors have read and complied with author guidelines, and they all have seen and approved this manuscript for publication. None of the authors had a conflict of interest to disclose concerning this manuscript.

We are grateful to the reviewers for their precious contributions and comments. We have revised our manuscript accordingly for grammar, style, structure, and we hope that you will now find it suitable for publication in the *World Journal of Clinical Cases*. In case of final acceptance, we agree to make this manuscript open-access.

The changes in the manuscript are identified in track changes mode. Below you can find a point-by-point reply to the reviewers. We used red to denote revised or inserted text.

Thank you for your precious time.

We are looking forward to receiving your decision in due time.

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Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

These are basic information about routine nursing care for patients with neurogenic bladder following spinal cord injury. Perineal care and catheter toilet for patients with indwelling catheter should also be emphasized. The use of suprapubic catheter versus transurethral indwelling catheter is also worth mentioning.

Response:

Thank you for your patience in reading our article. We humbly accept your comments on our manuscript. After reading your comments in detail, we agree that our article does have the above problems.

**1. 3.6 Urodynamic testing**

Urodynamic testing is a common examination method in urology<sup>18,19</sup>. It mainly tests the pressure, flow rate, and bioelectrical activity of each part of the urinary tract to establish whether there are diseases associated with dysuria. Studies<sup>20,21</sup> have shown that patients with previous symptoms of lower urinary tract may not be accurately diagnosed with lower urinary tract dysfunction based only on clinical symptoms. Single or combined application of symptom score, urine flow measurement, residual urine measurement, bladder measurement, and bladder wall thickness has been widely used in clinic examination to preliminarily diagnose lower urinary tract dysfunction. However, although lower urinary tract dysfunction can be classified according to these research results and given initial treatment, there are still some lower urinary tract dysfunctions with extreme diagnostic criteria that may be missed or wrongly treated.

There may be some difficulties in the urodynamic examination of neurogenic bladder patients<sup>22</sup>. For example, many neurogenic bladder patients lack symptoms due to impaired bladder sensation, or it may be difficult for patients to determine the time of urinary incontinence. Patients with a neurogenic bladder may not be able to

distinguish whether urine leakage is caused by urgency or pressure, such as urine leakage when entering or leaving a wheelchair. The severity of clinical symptoms in patients with complete neurological function is not completely consistent with urodynamic results, which is also true in patients with neurogenic bladder. Importantly, the severity of symptoms is not always related to the severity of urethral diseases. Some scholars<sup>23-25</sup> have reported that the correlation between neurological signs and symptoms and urodynamic evaluation results is poor in children with spinal cord dysplasia. In addition, although patients with spinal cord injury may have bladder dysfunction, the functional state of bladder and sphincter cannot be inferred based only on the results of neurological assessment. Urodynamics is very important to evaluate neurogenic bladder patients with high accuracy, because it is the only reliable index to judge upper urinary tract dysfunction and the best way to guide the treatment of the lower urinary tract.

Reviewer #2:

Scientific Quality: Grade D (Poor)

Grade B (Minor language polishing)

Conclusion: Minor revision

Well written manuscript A brief note on urodynamic testing, biofeedback and types of physiotherapy techniques need to be mentioned, as they form the basics of treatment of neurogenic bladder Few spelling and grammatical errors need to be revised

Response:

Thank you for your patience in reading our article. We humbly accept your comments on this manuscript. After reading your comments in detail, we agree that our article does have the above problem. The grammar mistakes in our manuscript has now been corrected by an English-speaking co-author.

## 1. 3.6 Urodynamic testing

Urodynamic testing is a common examination method in urology<sup>18,19</sup>. It mainly tests the pressure, flow rate, and bioelectrical activity of each part of the urinary tract to establish whether there are diseases associated with dysuria. Studies<sup>20,21</sup> have shown that patients with previous symptoms of lower urinary tract may not be accurately diagnosed with lower urinary tract dysfunction based only on clinical symptoms. Single or combined application of symptom score, urine flow measurement, residual urine measurement, bladder measurement, and bladder wall thickness has been widely used in clinic examination to preliminarily diagnose lower urinary tract dysfunction. However, although lower urinary tract dysfunction can be classified according to these research results and given initial treatment, there are still some lower urinary tract dysfunctions with extreme diagnostic criteria that may be missed or wrongly treated.

There may be some difficulties in the urodynamic examination of neurogenic bladder patients<sup>22</sup>. For example, many neurogenic bladder patients lack symptoms due to impaired bladder sensation, or it may be difficult for patients to determine the time of urinary incontinence. Patients with a neurogenic bladder may not be able to distinguish whether urine leakage is caused by urgency or pressure, such as urine leakage when entering or leaving a wheelchair. The severity of clinical symptoms in patients with complete neurological function is not completely consistent with urodynamic results, which is also true in patients with neurogenic bladder. Importantly, the severity of symptoms is not always related to the severity of urethral diseases. Some scholars<sup>23-25</sup> have reported that the correlation between neurological signs and symptoms and urodynamic evaluation results is poor in children with spinal cord dysplasia. In addition, although patients with spinal cord injury may have bladder dysfunction, the functional state of bladder and sphincter cannot be inferred based only on the results of neurological assessment. Urodynamics is very important to evaluate neurogenic bladder patients with high quality, because it is the only reliable index to judge upper urinary tract dysfunction and the best way to guide the treatment of lower urinary tract.

17. Nager CW, Brubaker L, Litman HJ, Zyczynski HM, Varner RE, Amundsen C, et

al. A randomized trial of urodynamic testing before stress-incontinence surgery. The New England journal of medicine. 2012;366(21):1987-1997.

18. Bodmer NS, Wirth C, Birkhäuser V, Sartori AM, Leitner L, Averbek MA, et al. Randomised Controlled Trials Assessing the Clinical Value of Urodynamic Studies: A Systematic Review and Meta-analysis. European urology open science. 2022;44:131-141.

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23. Maison POM, Lazarus J. The management of paediatric neurogenic bladder: an approach in a resource-poor setting. Paediatrics and international child health. 2017;37(4):280-285.

24. Metcalfe P. Nuances and Pitfalls in Pediatric Urodynamics: Perfecting Imperfection. The Journal of urology. 2021;205(2):333-334.

Reviewer #3:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

I would like to thank you for inviting me to review this manuscript. In the present study, a narrative technique was used to explore available rehabilitation facilities for patients with neurogenic bladder after spinal cord injury. In my view the research idea

is of great interest but the study could benefit from more precision. This would enhance the quality of the study and interest to the scientific community. 1. The format and structure of article should be improved as is mentioned in the author guideline for manuscript submission. 2. I can't find the materials and method section. This section can effectively include some information concerning search strategy and the narrative technique. 3. It is suggested that the discussion section be reconsidered in terms of study limitations. 4. A conclusion section should be added to the end of the article. This section can be briefly described the implications of the study, followed by recommendations for future studies. 5. Finally, I suggest that the manuscript is proofread by a native English speaker or Editing service. So please make sure there are no English errors.

**Response:**

Thank you for your patience in reading our article. We humbly accept your comments on our manuscript. After reading your comments in detail, we agree that our article does have the above problems. We have read the submission format of the World Journal of Clinical Case in detail, and have now carefully revised and checked it according to the guidelines. The details of our revision are listed below. In addition, the grammar mistakes found in the manuscript has now been corrected by an English-speaking co-author.

**1. 1. Materials and Method**

We reviewed the recent medical literature on patients with neurogenic bladder, focusing on neurogenic bladder caused by spinal cord injury. The articles published by PubMed from July 2010 to July 2022 were searched. The following medical subject titles or free-text terms are used in the search: neurogenic bladder, anxiety, psychological burden, spinal cord injury, nursing. Search is limited to papers written in English, and there is no restriction on the types of article.

**2. 5. Limitations**

Although we have made efforts to search the existing literature on neurogenic bladder care, our research still has some limitations, including the retrospective nature of the studies reviewed and inherent limitations related to observational studies. Limited by

our search strategies, our search results may not be comprehensive enough, so it may bring some bias to the conclusions. The incidence and nursing methods of neurogenic bladder may be geographically different and may vary according to the knowledge of local medical practitioners. These factors have not been analyzed in detail due to the lack of relevant supporting data. However, even though the number of studies reviewed was small, the clinical significance of the research results is still relevant.

### 3. Conclusion

This review reviews the research on neurogenic bladder care that can be retrieved in PubMed during the last twelve years. Many complications caused by a neurogenic bladder, such as urinary tract infection, kidney calculi, ureteral stones, and hydronephrosis, not only bring trauma to the patient's body, but also seriously affect the diagnosis and treatment of these complications. Repeated hospital admissions and long-term home care could increase the psychological distress of the patients. Therefore, in the diagnosis, treatment, and care of neurogenic bladder, psychological care is also an essential component. It has been found in clinical practice that intermittent catheterization can assist in maintaining bladder compliance, protecting renal function, and accelerating recovery. At the same time, it helps to improve the patients' life quality and reduce psychological distress. Our review provides noteworthy information for the future care of patients with neurogenic bladder. Psychological care of patients with neurogenic bladder is also important during the process of the patients' rehabilitation. Intermittent urethral catheterization is superior to other forms of traditional urethral catheterization.

Science editor:

The manuscript has been peer-reviewed, and it's ready for the first decision.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

Thank you for your review and approval of our manuscript.

Company editor-in-chief:

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Clinical Cases, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, the author(s) must add a table/figure to the manuscript. Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the RCA. RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: <https://www.referencecitationanalysis.com/>.

Thank you for your review and approval of our manuscript. I have added two figures to the article. The details are shown below.

## 1.Figures



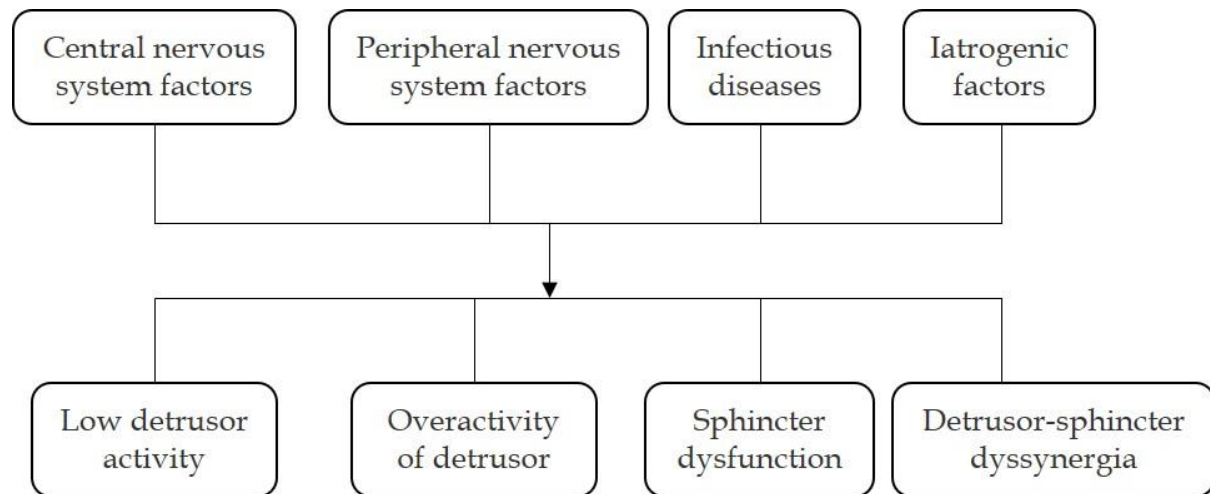


Figure 1. Pathophysiology of neurogenic bladder

Neurogenic bladder is the dysfunction of the lower urinary tract caused by the disorder of neural regulation mechanism. All diseases that may affect the nerve regulation of urine storage and urination may cause bladder or urethral dysfunction, thus causing neurogenic bladder.

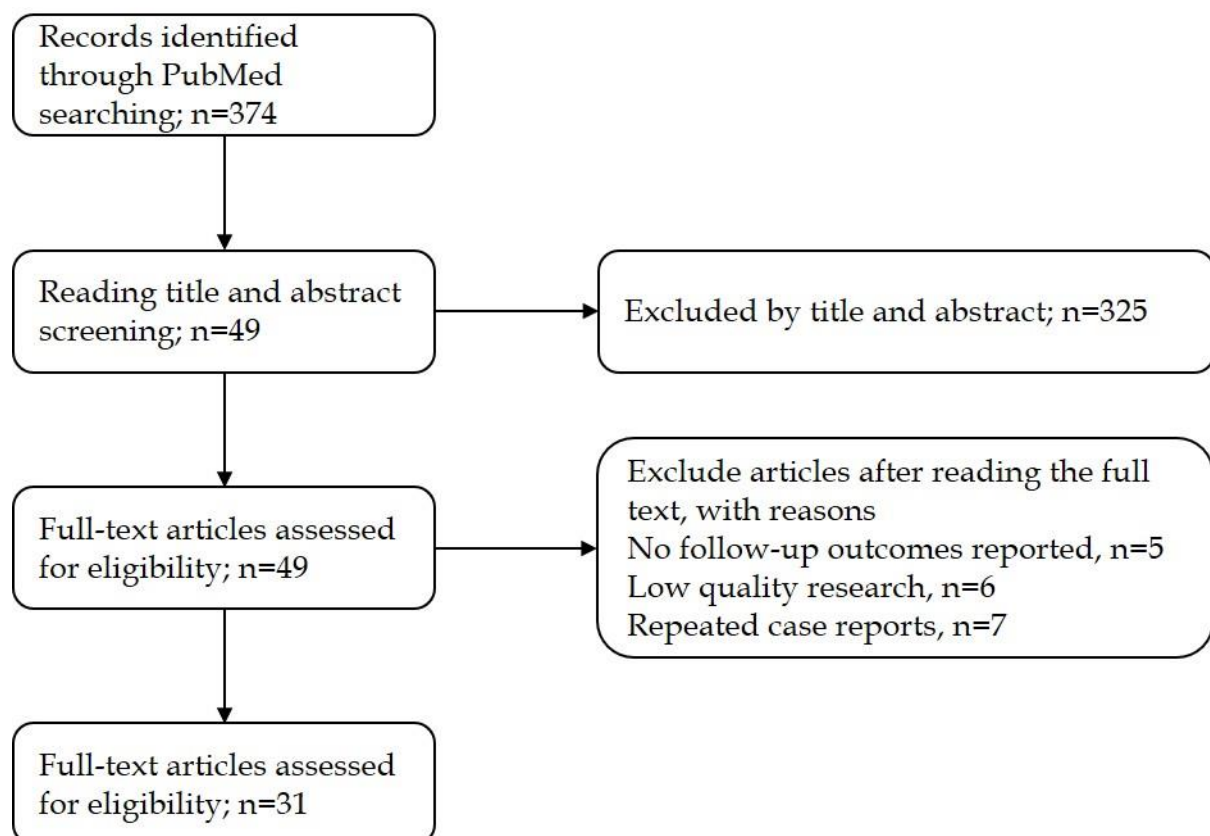


Figure 2. Flowchart of all studies found in PubMed search

2. I present the highlights of the latest cutting-edge research results in the conclusion

section.

This review reviews the research on neurogenic bladder care that can be retrieved in PubMed during the last twelve years. [...] Our review provides noteworthy information for the future care of patients with neurogenic bladder. Psychological care of patients with neurogenic bladder is also important during the process of the patients' rehabilitation. Intermittent urethral catheterization is superior to other forms of traditional urethral catheterization.

3. I actively use RCA search system, and I am honored to be a registered member of RCA (RCA ID: 00001381)