

How effective and safe are current interventions for sexual dysfunction following stroke? A Cochrane Review summary with commentary

Carlotte Kiekens^{a,*} and Vanessa M. Young^b

^a*IRCCS MultiMedica, Milano, Italy*

^b*School of Social and Behavioral Sciences, Arizona State University, Phoenix, AZ, USA*

Abstract.

BACKGROUND: Sexual dysfunction (SD) is experienced by 50% of stroke survivors, and it is identified as critical in their rehabilitation management, but often remains unaddressed.

OBJECTIVE: To evaluate the effectiveness and adverse events of currently available interventions for SD following stroke.

METHODS: A summary of the Cochrane Review by Stratton et al. 2020, with comments from a rehabilitation perspective.

RESULTS: Three randomized control trials with a total of 212 participants were included. Evidence quality was very low for all assessed interventions (pharmacological, psycho-educational and physical therapy). The efficacy of pelvic floor muscle training for lower urinary tract symptoms and erectile dysfunction remains uncertain. Pharmacological interventions may improve sexual functioning, while psychoeducation show little to no difference on sexual functioning outcomes.

CONCLUSIONS: The effectiveness of current rehabilitation interventions for SD following stroke remains uncertain due to the low quality of evidence and limited sample size. Further studies with improved methodology should investigate rehabilitation interventions for SD in stroke survivors to improve their quality of life.

Keywords: Stroke, sexuality, sexual satisfaction, rehabilitation, systematic review

The aim of this commentary is to discuss from a rehabilitation perspective the Cochrane Review “Interventions for sexual dysfunction following stroke” (Stratton et al., 2020)^a, published by Cochrane Stroke Group. This Cochrane Corner is produced in agreement with NeuroRehabilitation by Cochrane Rehabilitation with views* of the review summary authors in the “implications for practice” section.

1. Background

A stroke occurs when the blood supply to part of the brain is suddenly interrupted or reduced, lead-

^aThis summary is based on a Cochrane Review previously published in the Cochrane Database of Systematic Reviews 2020, Issue 5, Art. No.:CD011189, DOI: 10.1002/14651858.CD011189.pub2 (see www.cochranelibrary.com for information). Cochrane Reviews are regularly updated as new evidence emerges and in response to feedback, and Cochrane Database of Systematic Reviews should be consulted for the most recent version of the review.

*The views expressed in the summary with commentary are those of the Cochrane Corner authors (different than the original Cochrane Review authors) and do not represent the Cochrane Library or Wiley.

*Address for correspondence: Carlotte Kiekens, IRCCS MultiMedica, Via San Vittore 12, 20123 Milano, Italy. E-mail: carlotte.kiekens@multimedica.it.

ing to permanent damage of an area of the brain. Stroke is considered one of the world's leading causes of death and disability. Although sexual dysfunction (SD) post-stroke is not commonly discussed, 50% of stroke survivors experience it to some degree. Post-stroke SD presents a multifactorial etiology, with identified causes including medication, psychological symptoms (e.g., fear, depression), physiological changes, autonomic and neuroendocrine dysfunction. SD may manifest as a decrease in libido and coital frequency, vaginal dryness, erectile dysfunction (ED) or difficulties with ejaculation or orgasm. Many stroke survivors identify SD as critical to their rehabilitation management. Stratton et al. (2020) conducted a systematic review of the interventions for post-stroke SD.

Interventions for sexual dysfunction following stroke

(Stratton H, Sansom J, Brown-Major A, Anderson P, Ng, L, 2020)

2. Objective

The aim of this Cochrane Review was to assess the effectiveness and adverse events of currently available interventions for SD following stroke.

3. What was studied and methods

The population examined in this review was female and male adults aged ≥ 18 years who have sustained a stroke, as well as their partners. The interventions studied were mechanical devices, pharmacological or complementary medicine interventions, and were compared to placebo. Other non-pharmacological interventions that were studied were compared to usual care. The primary outcomes studied were sexual function and sexual satisfaction, measured in both patients and their partners using validated and non-validated instruments. Secondary outcomes studied in patients and their partners, included quality of life, psychological wellbeing, satisfaction with the intervention, sexual knowledge, and marital/relationship satisfaction. Adverse events were considered. The review authors conducted a literature search to find randomized controlled trials up to November 27, 2019 in 14 databases.

4. Results

The review included three randomized controlled trials with a total of 212 participants.

The review shows that:

• Pharmacological interventions

Lu et al. compared the effectiveness and safety of sertraline ($n=58$), to placebo ($n=56$), 4 to 6 hours before intercourse ($n=58$) to treat secondary premature ejaculation in young males, aged between 23 and 45. Very low quality evidence suggests that sertraline may improve premature ejaculation. Mild adverse effects were recorded in both groups, mostly gastrointestinal.

• Psycho-educational intervention

Ng and colleagues (2020) compared the effectiveness of a structured sexual rehabilitation program including face-to-face counselling ($n=35$) versus written patient education material alone ($n=33$) in stroke inpatients (mean age 63 years). No clear difference to sexual functioning, anxiety and depression, quality of life, and functional independence was shown (low quality of evidence), suggesting that individualized sexual rehabilitation programs may make little or no difference to sexual functioning as compared to written material alone.

• Physical therapy intervention

Tibaek et al. (2015) compared 12 weeks of pelvic floor muscle training (PFMT) by physiotherapists ($n=16$) with standard general rehabilitation without any specific treatment ($n=15$) for lower urinary tract symptoms (LUTS) in 31 male outpatients post-stroke (median age 68). No statistically significant differences for erectile function were found. Due to the low quality of the evidence and high risk of bias in this study, the efficacy of PFMT for LUTS and ED remains uncertain. No adverse effects were reported.

5. Conclusions

The authors concluded that there is currently insufficient evidence to reach any conclusions about the effectiveness, or harm, of any intervention for SD (Stratton et al., 2020). Available data from randomized controlled trials is inadequate to ascertain whether sertraline, pelvic floor muscle training, or individualized sexual rehabilitation has any benefit to stroke survivors experiencing SD, or their partners. The authors highlight that they have identified a lack of evidence, rather than evidence of lack of effect. Well-designed RCTs of longer duration are needed

to evaluate the effectiveness of rehabilitation interventions for SD among stroke survivors. However, double-blinding may not be possible for complex interventions.

6. Implications for practice in neurorehabilitation

Many stroke survivors experience sexual dysfunction and have expressed interest in obtaining patient education and counselling services. However, while literature is increasing over the last decade, the issue often remains unaddressed in clinical practice due to attitudinal and organizational barriers. This Cochrane Review showed that high-quality evidence on the effectiveness of specific interventions is still lacking, and urges for well-designed and long-term studies on the rehabilitation management of post-stroke sexual problems, also in women and people with diverse sexual backgrounds. In the meanwhile, we encourage the training of rehabilitation professionals on knowledge and skills to be able to comply with current best practice guidelines: provide education and counselling to stroke survivors and their partners, and refer to a sexual health specialist when needed (Mountain 2020; Low 2022).

Conflict of interest

The authors declare no conflicts of interest.

Acknowledgments

The authors thank Cochrane Rehabilitation and Cochrane Stroke for reviewing the contents of the Cochrane Corner.

References

- Low, M. A., Power, E., & McGrath M. (2021). Sexuality after stroke: Exploring knowledge, attitudes, comfort and behaviours of rehabilitation professionals. *Annals of Physical and Rehabilitation Medicine*, 65(2), 101547. <https://doi.org/10.1016/j.rehab.2021.101547>.
- Mountain, A., Patrice Lindsay, M., Teasell, R., Salbach, N. M., de Jong, A., Foley, N., Bhogal, S., Bains, N., Bowes, R., Cheung, D., Corriveau, H., Joseph, L., Lesko, D., Millar, A., Parappilly, B., Pikula, A., Scarfone, D., Rochette, A., Taylor, T., Vallentin, T., Dowlatshahi, D., Gubitz, G., Casaubon, L. K., & Cameron, J. I. (2020). Canadian Stroke Best Practice Recommendations: Rehabilitation, Recovery, and Community Participation following Stroke. Part Two: Transitions and Community Participation Following Stroke. *International Journal of Stroke*, 15(7), 789-806. <https://doi.org/10.1177/1747493019897847>.
- Stratton, H., Sansom, J., Brown-Major, A., Anderson, P., & Ng, L. (2020). Interventions for sexual dysfunction following stroke. *Cochrane Database of Systematic Reviews*, 5. <https://doi.org/10.1002/14651858.CD011189.pub2>