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Introduction

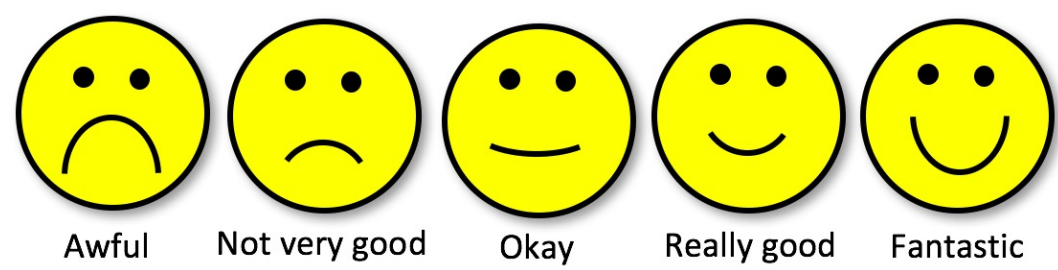
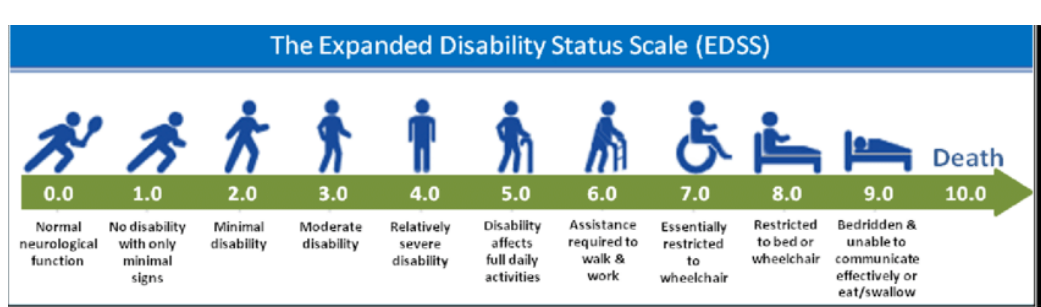
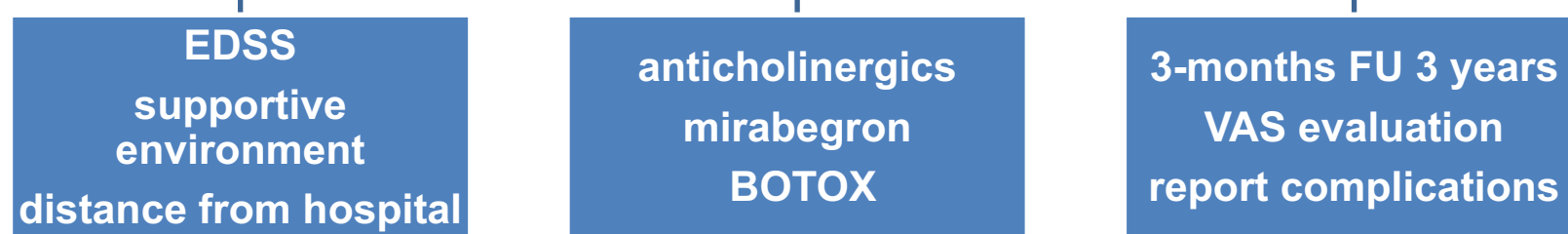
Clean intermittent catheterizations (CIC) are one of the suggested treatments for patients with a disability to empty their bladder or a significant post void residual (PVR). One of the most studied patient groups are neurological patients with dysfunction of the lower urinary tract, known as neurogenic lower urinary tract dysfunction (NLUTD). NLUTD has been highlighted in patients with spinal cord injury (SCI) and Multiple Sclerosis (MS). CIC as ideal treatment for neuro-urological patients has two main goals: bladder emptying and preserving low detrusor pressures in filling phase, protecting the upper urinary tract and reducing episodes of incontinence. Although CIC is strongly recommended in neuro-urological cases, it remains a minimal invasive treatment with complications, mostly minor. Hence, there is a number of patients who discontinue CIC, endangering the proper function of both lower and upper urinary tract. The aim of our study was to investigate the reasons that lead neuro-urological patients to cease CIC treatment and suggest potential factors leading to this decision.

Methods and Materials

This is a prospective observational study including adult patients who visited the Neuro-urological and Urodynamics clinic of our Urology Department. The catheters offered to all patients were hydrophile, pre-lubricated, containing PVC, ready for use.

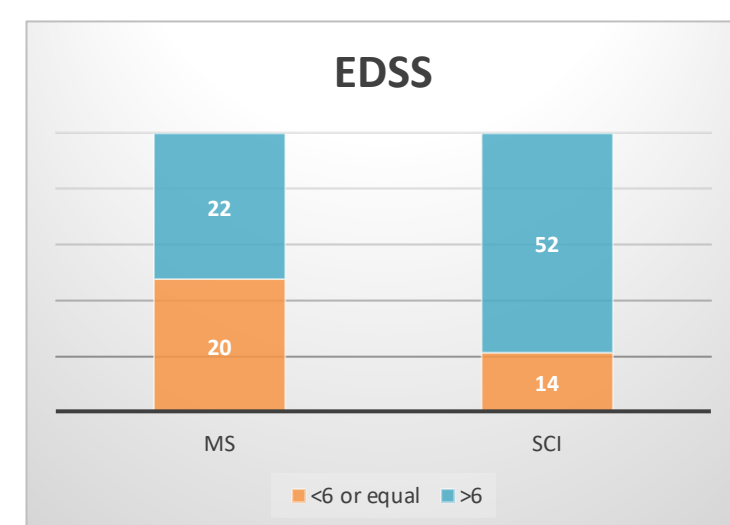
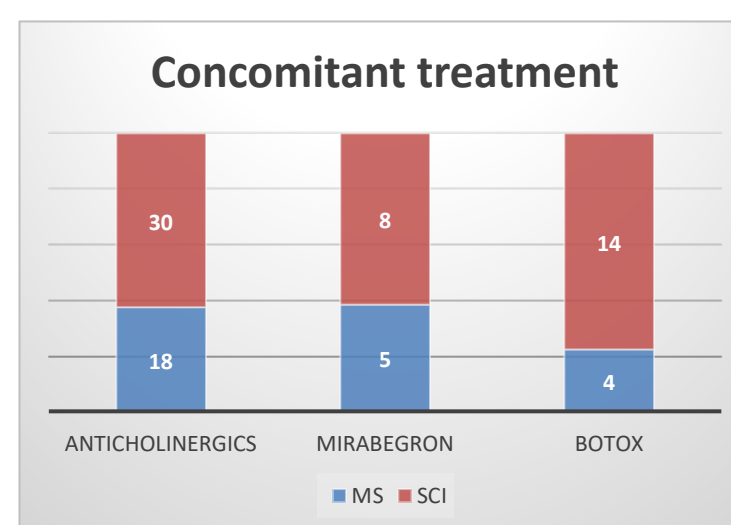
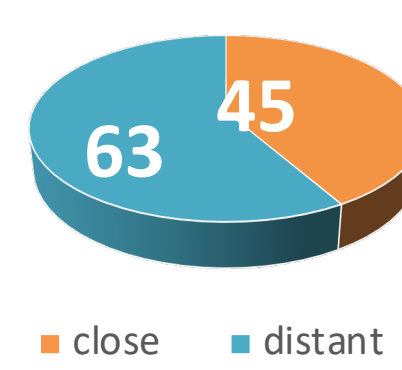
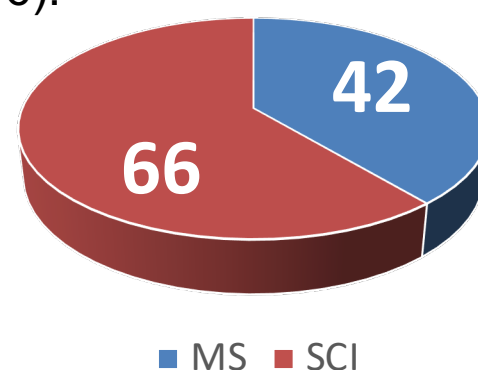
SCI or MS self-CIC

excluded
inability to perform self-CIC
use <3 catheters per day
non-compliance with 6-months FU

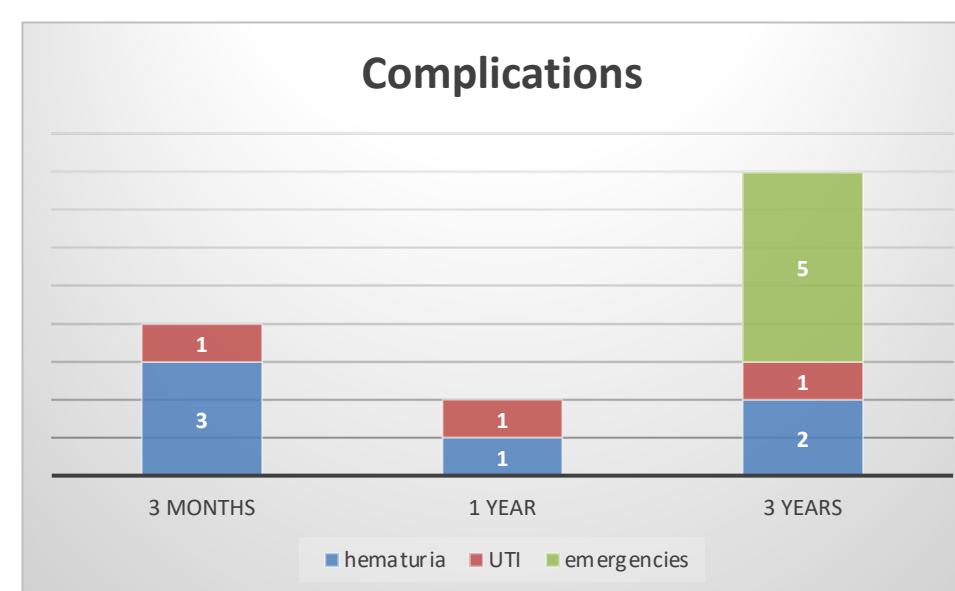


Results

The study included 108 patients, 58 men and 50 women with a median age of 41 years (range: 19 – 60) and a median follow-up of 26 months (range: 6 – 60). The median number of used catheters were 5 (range: 3 – 6).



- 3 months: drop out NONE, mVAS: 8
- 1 year: drop out 4, mVAS: 8
MS with EDSS> 6.
6 patients ceased their visits in favor of a closer center.
- 3 years: drop out 9, mVAS: 7
6 MS with EDSS> 6 and 3 SCI, needed to stop oral treatment due to side-effects.
2 more opting for a less distant hospital



During pandemic, 98 (90.7%) patients had typical visits and 10 (9.3%) phone-call evaluation. Interestingly, all patients with phone-calls completed their 3-year follow-up, continuing CIC.

Discussion

Key factors

Expanded Disability Status Scale



Limitations

- short but close FU
- scarcity of data
- lack of transitional care support

Conclusions

Adherence to CIC treatment is crucial for patients with NLUTD but it could be affected by a low EDSS, concomitant medication and long distance from specialized centres. High-quality catheters, patients' education and close follow-up could be essential for CIC continuation, while further studies with extended follow-up are required to establish a follow-up protocol.

References

- Blok BFM, Pannek J, Castro Diaz DM et al. EAU Guidelines on Neuro-urology 2023, Edn. presented at the EAU Annual Congress Milan, March 2023. ISBN 978-94-92671-19-6
- Prieto JA, Murphy CL, Stewart F et al. Intermittent catheter techniques, strategies and designs for managing long-term bladder conditions. Cochrane Database Syst Rev. 2021 Oct 26;10(10):CD006008. doi: 10.1002/14651858.CD006008.pub5
- Joshi AD, Shukla A, Chawathe V et al. Clean intermittent catheterization in long-term management of neurogenic bladder in spinal cord injury: Patient perspective and experiences. Int J Urol. 2022 Apr;29(4):317-323. doi: 10.1111/iju.14776