

March 2024

A Pilot Study Assessing the Efficacy of Amniotic Bladder Therapy in Spinal Cord Injury Patients with Female Sexual Dysfunction

Kyle P. O'Hollaren

Wayne State University School of Medicine, hj2164@wayne.edu

Emma Ross

Wayne State University School of Medicine, emmalenorross@wayne.edu

Codrut Radoiu

Wayne State University School of Medicine, codrut.radoiu@med.wayne.edu

Lincoln Erickson

Rehabilitation Institute of Michigan, lincoln.erickson@med.wayne.edu

Michael Bush-Arnold

Rehabilitation Institute of Michigan, mbush-ar@dmc.org

See next page for additional authors

Follow this and additional works at: https://digitalcommons.wayne.edu/som_srs

 Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

O'Hollaren, Kyle P.; Ross, Emma; Radoiu, Codrut; Erickson, Lincoln; Bush-Arnold, Michael; Bitar, Ali; Lucas, Steven; and Dhar, Nivedita, "A Pilot Study Assessing the Efficacy of Amniotic Bladder Therapy in Spinal Cord Injury Patients with Female Sexual Dysfunction" (2024). *Medical Student Research Symposium*. 317. https://digitalcommons.wayne.edu/som_srs/317

This Research Abstract is brought to you for free and open access by the School of Medicine at DigitalCommons@WayneState. It has been accepted for inclusion in Medical Student Research Symposium by an authorized administrator of DigitalCommons@WayneState.

Authors

Kyle P. O'Hollaren, Emma Ross, Codrut Radoiu, Lincoln Erickson, Michael Bush-Arnold, Ali Bitar, Steven Lucas, and Nivedita Dhar

Title: A Pilot Study Assessing the Efficacy of Amniotic Bladder Therapy in Spinal Cord Injury Patients with Female Sexual Dysfunction

Kyle O'Hollaren¹, Emma Ross, MD¹, Codrut Radoiu, BMSc¹, Lincoln D. Erickson, MD^{2,4}, Michael Bush-Arnold, MD^{2,4}, Ali Bitar, MD^{2,4}, Steven Lucas, MD^{1,3} and Nivedita Dhar, MD^{3,4}.

1 Wayne State University School of Medicine, Detroit, MI, USA

2 Rehabilitation Institute of Michigan, Detroit, MI, USA

3 John D. Dingell VA Medical Center, Detroit, MI, USA

4 Detroit Medical Center, Detroit, MI, USA

Introduction and Objectives: Female sexual dysfunction (FSD) following spinal cord injury (SCI) presents with abnormalities in sexual desire, arousal, orgasm, pain, distress, and dissatisfaction. FSD negatively impacts quality of life and is often refractory to available treatment options. Previously, we reported preliminary benefits of intra-detrusor micronized amniotic membrane (AM) on detrusor dysfunction following SCI. In this study, we evaluated the effect of intra-detrusor micronized AM injection on FSD symptoms in SCI patients using the multi-domain female sexual function index (FSFI) and pain visual analog scale (VAS).

Methods: Five SCI females (mean age: 32 ± 12 years) with FSD recalcitrant to multiple therapies received intra-detrusor injections under general anesthesia of reconstituted 100mg micronized AM. The FSFI questionnaire and pain VAS were obtained preoperatively and at 4, 8, 12, 24, and 36-weeks post-injection.

Results: All five patients exhibited an improvement from baseline FSFI at 12 weeks. All patients relapsed at 24 to 36 weeks. Pain (VAS) associated with intercourse decreased from 8.4 ± 0.9 at baseline to 7.1 ± 0.8 at 4 weeks, 6.7 ± 1.0 at 8 weeks, 6.3 ± 1.2 at 12 weeks, 6.2 ± 0.6 at 24 weeks and then increased to 7.9 ± 0.6 at 36 weeks. No adverse events arose during the study.

Conclusion: ABT therapy in SCI females with severe FSD symptoms holds potential promise, although all patients experience symptomatic relapse at 24 to 36 weeks post-injection. More research is needed to better understand the mechanism through which ABT treats these complex sexual disorders.

Keywords: Amniotic bladder therapy (ABT), female sexual dysfunction (FSD), spinal cord injury (SCI), amniotic membrane (AM), female sexual function index (FSFI), visual analog scale (VAS)

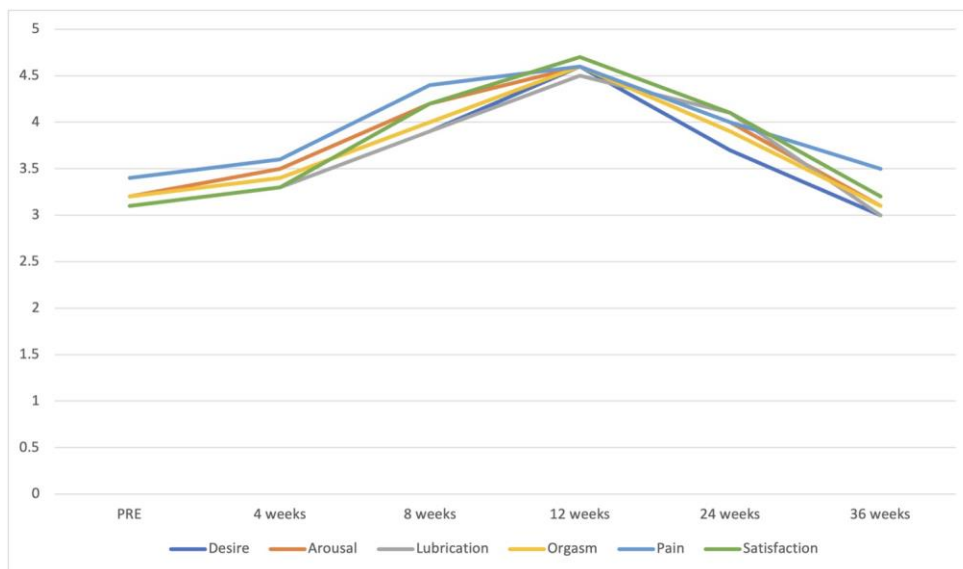


Figure 1. Average FSFI scores before and after ABT