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Six- Month Report Assessing the Feasibility and Effectiveness of Amniotic Bladder Therapy in Patients with Chronic Radiation Cystitis

Samy Shelbaya
Wayne State University, hm2747@wayne.edu

Raghav Madan
Wayne State University, fh0522@wayne.edu

Nick Pryde
Wayne State University, hi3187@wayne.edu

Jack Vercnocke
Wayne State University, jack.vercnocke@med.wayne.edu

Codrut Radoiu
Wayne State University, hd3243@wayne.edu

See next page for additional authors

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Authors
Samy Shelbaya, Raghav Madan, Nick Pryde, Jack Vercnocke, Codrut Radoiu, Julian Julian Jeberaeel, Nitin Vaishampayan, and Nivedita Dhar

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Six- Month Report Assessing the Feasibility and Effectiveness of Amniotic Bladder Therapy in Patients with Chronic Radiation Cystitis

Samy Shelbaya BS, Raghav Madan, MD, Nicholas Pryde, BS, Jack Vercnocke, MD, Codrut Radoiu, BMSc Julian Jeberael, MD, Nitin Vaishampayan, MD and Nivedita Dhar, MD.

1 Wayne State University School of Medicine, Detroit, MI, USA
2 Karmanos Cancer Center, Detroit, MI, USA
3 John D. Dingell VA Medical Center, Detroit, MI, USA
4 Detroit Medical Center, Detroit, MI, USA.

Introduction: In view of the pathophysiology of chronic radiation cystitis (CRC) that is mainly caused by activation of an inflammatory cascade leading to chronic inflammation, vascular damage and fibrosis, amniotic membrane (AM) based therapy has emerged as a potential therapeutic approach for radiation-induced tissue injury due to its immunomodulatory, vasculogenic and anti-fibrotic properties. We have previously reported that amniotic bladder therapy (ABT) provides symptomatic improvement in refractory CRC patients for up to 3 months. Herein, we evaluated the durability of ABT up to 6 months.

Methods: CRC patients recalcitrant to multiple therapies were eligible for the study and received intra-detrusor injections under general anesthesia of reconstituted 100mg micronized AM. The Interstitial Cystitis Symptom Index (ICSI), Interstitial Cystitis Problem Index (ICPI), Bladder Pain/Interstitial Cystitis Symptom Score (BPIC-SS), Overactive Bladder (OAB) Assessment Tool, SF-12 Health Survey were repeated at pre-op and up to 36 weeks post-injection. Cystoscopy and uroflow were done pre-injection, 12, 24, and 36 weeks.

Results: Five consecutive patients (average age: 64 ± 20 years) exhibited a progressive improvement from their baseline lower urinary tract symptoms to 20 weeks (Figure 1). At 24 weeks, the improvement was maintained in four of the patients, however diminishing benefit of ABT was seen at 36 weeks. This coincided with an initial improvement in uroflow assessment (Table 2). One patient’s symptoms rebounded at 24 weeks and worsened at 36 weeks.

Conclusion: This data suggests most CRC patients have durable benefit after ABT, however some patients may have symptoms rebound at 36 weeks.
Figure 1. Average Lower Urinary Tract Symptom Questionnaire Scores before and after ABT.
Table 2. Uroflow parameters at baseline, 3 months, 6 months, and 9 months post-injection

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<th>Maximum Flow Rate (mL/sec)</th>
<th>Average Flow Rate (mL/sec)</th>
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<th>Voided volume (mL)</th>
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<td>6 Months</td>
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