



## BACKGROUND

Low back pain, often caused by degenerative disc disease (DDD), is one of the most common reasons for primary care and orthopedic office visits. Current treatment options center around reducing inflammation and fail to address the underlying pathology. Concentrated bone marrow aspirate (BMAC) injections, along with conservative management, represent a cost-effective and minimally invasive treatment option that could postpone further disc degeneration. Our hypothesis is that BMAC injections, along with conservative care, can provide short and long-term pain reduction in patients with DDD.

## METHODS

**Study Design:** A retrospective chart review was preformed to identify patients.

**Study Population:** 17 Patients who presented to The McGinley Clinic with LDDD and received an intradiscal BMAC injection over the last 6 years.

**Measurements:** A 0-10 patient self-reported pain scale was used as the primary outcome. Secondary outcomes included adverse events and additional treatments.

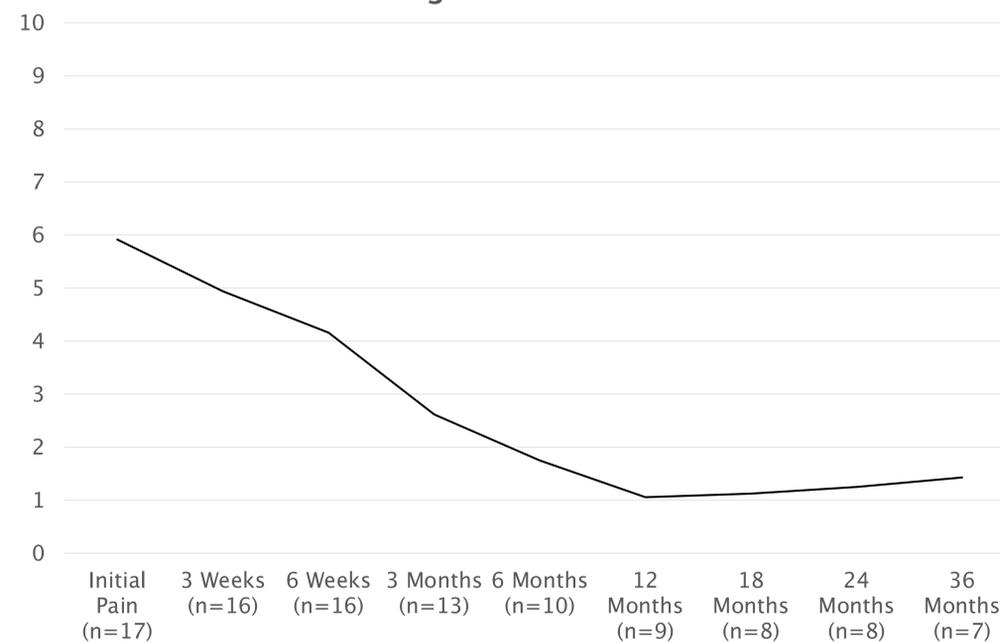
**Data Collection Protocol:** Pain scores were collected prior to the initial treatment and post-treatment at 3 weeks, 6 weeks, 3 months, 6 months, 12 months, 18 months, 24 months, and 36 months.

**Statistical Analysis:** Comparisons were analyzed using a paired-samples sign test.

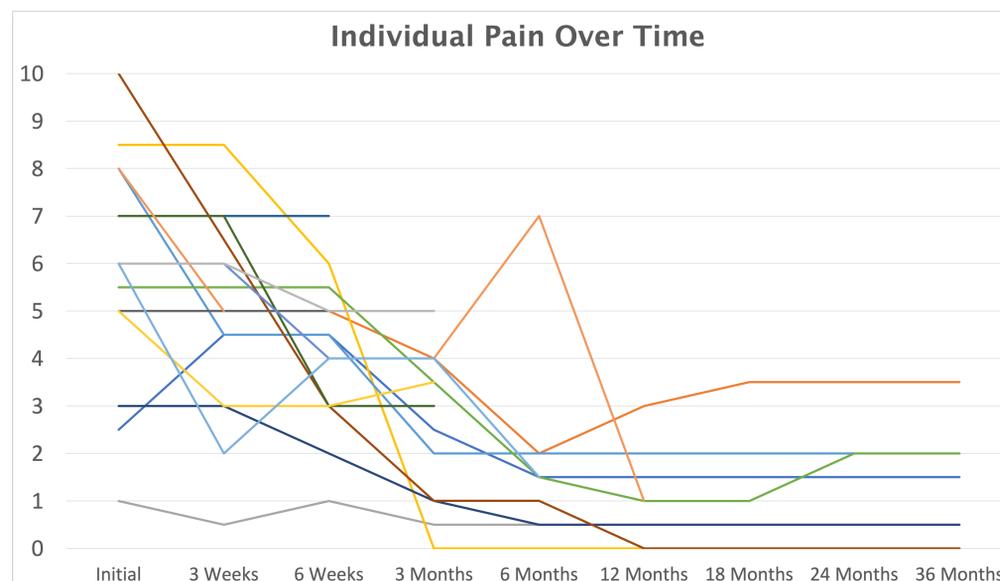
## RESULTS

- Pain levels were reduced at 3 months post-injection compared with baseline for 13 patients with an average decrease of 3.3 points ( $p = < 0.001$ ).
- For the 7 patients who have reached the 36-month endpoint, pain had decreased 4.5 points ( $p=0.016$ ).
- No adverse events were reported. No patient has currently progressed to surgery.

Average Pain Over Time



Individual Pain Over Time



## DISCUSSION

- BMAC injections combined with conservative care can provide short and intermediate pain relief.
- Patients benefited most from the BMAC injections during the first six months.
- BMAC Injections provide an effective treatment that could potentially delay further disc degeneration.
- The small sample size of this study is a major limitation. Future studies could include multiple centers to access more patients.

## CONCLUSIONS

Patients with DDD who were treated with BMAC, along with conservative care, experienced a significant improvement in long-term pain levels without major adverse events related to the treatment. This represents a viable minimally invasive treatment option for patients with painful DDD