

METHODS

- This retrospective observational study evaluated the effectiveness of percutaneous hydrotomy in **25 patients** (mean age: 59.32 years) with **chronic LBP** persisting for an average of 53.6 months.
- The study cohort included various **pathologies** such as **herniated discs, spinal stenosis, and sciatica**.

Treatment protocols utilized two techniques:

- 1.Hand-Syringe Technique:** A localized subcutaneous injection of a mesochelation solution (e.g., EDTA, magnesium, or local anesthetics) was involved.
- 2.Mesoperfusion Technique:** Delivered a larger volume of saline-based solutions with anti-inflammatory agents over extended periods.
- Sessions for 4–8 weeks, followed by biweekly or monthly maintenance sessions **as needed**.

Per institutional policy, IRB exemption was obtained, as no identifiable patient information was involved. All procedures adhered to ethical standards.

RESULTS

- ✓ Patients reported **significant pain relief**, with mean Visual Analog Scale (VAS) scores decreasing from 7.20 pre-treatment to 1.80 post-treatment (p < 0.00001).
- ✓ Most patients (14/25) discontinued analgesics after an average of 15.12 weeks.
- ✓ Improvements were sustained for up to six months post-treatment, highlighting the technique's efficacy and durability.

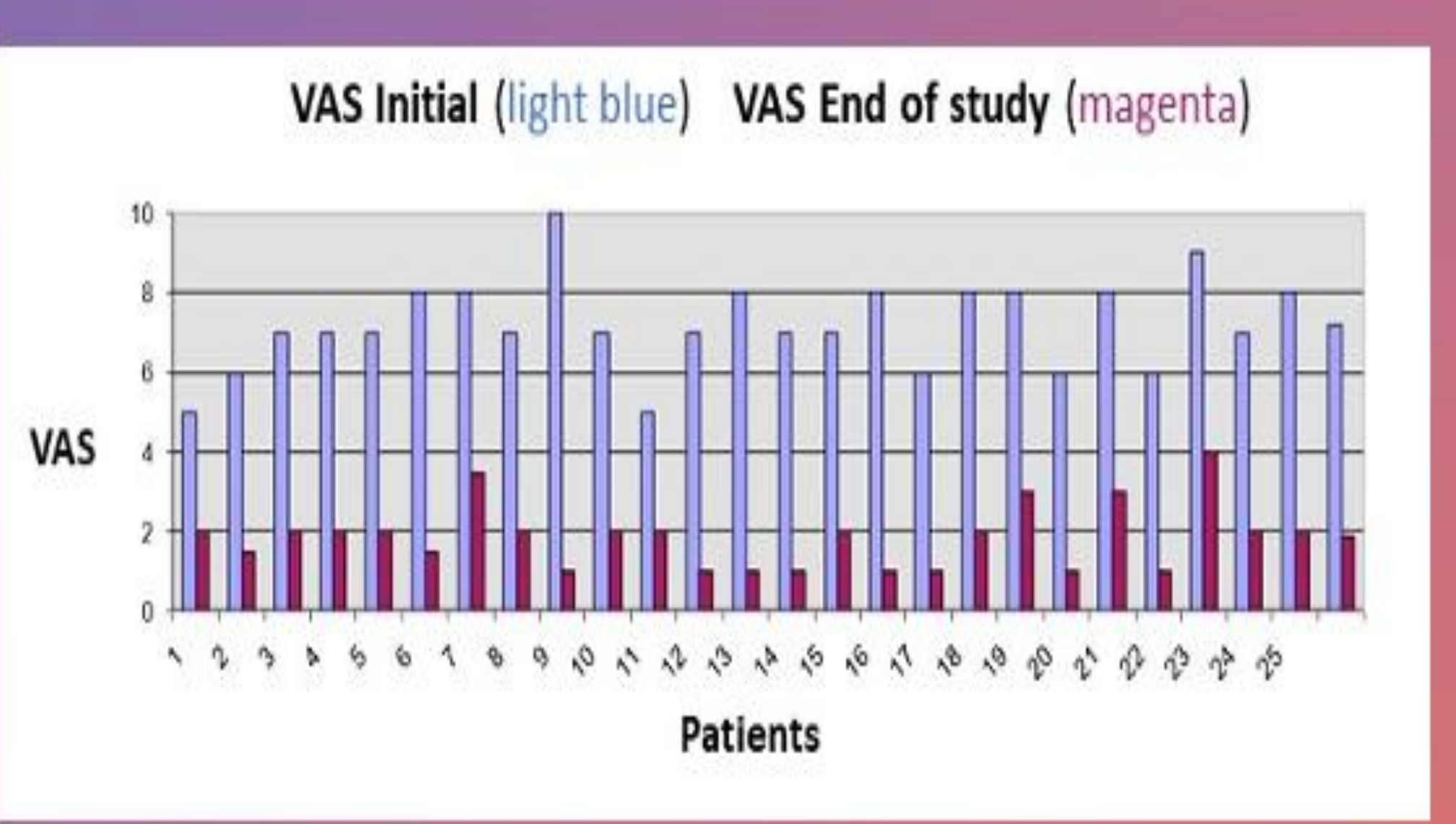


Figure 1. Visual analog scale (VAS) assessment before and 3.5 months of treatment by percutaneous hydrotomy in 25 patients (Guez,2after021)



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Percutaneous Hydrotomy –
A Novel Approach To The Treatment Of
Lower Back Pain

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INTRODUCTION

- **Chronic low back pain (LBP)** remains a significant **public health challenge**, affecting millions globally and driving substantial healthcare costs.
- **Conventional treatments**—ranging from physical therapy to invasive surgeries—often yield limited efficacy, with significant side effects or complications.

Mesotherapy, a **minimally invasive** technique using subcutaneous injections of diluted medications, has shown to be **promising in pain management**. Building on mesotherapy, percutaneous hydrotomy employs large-volume subcutaneous delivery of therapeutic agents, offering a novel alternative for chronic LBP management.



Figure 2. Mesochelation of the lower back using the hand-syringe technique with a 4mm mesotherapy needle.



Figure 3. Mesoperfusion of the back using mesotherapy infusion needles.



CONCLUSION

- Percutaneous hydrotomy has demonstrated itself as a safe, minimally invasive alternative for managing chronic LBP, particularly in patients unresponsive to traditional treatments.
- This approach leverages subcutaneous tissues for prolonged drug release, reducing systemic exposure and associated side effects.
- Key advantages include its non-opioid basis, making it particularly relevant amidst the opioid crisis. While findings are promising, they are limited by the study's small cohort and lack of randomized control.
- However, this should not deter us , as further large-scale trials are needed to validate efficacy and explore broader applications, including systemic drug delivery and chronic wound management.
- The potential of percutaneous hydrotomy offers a promising outlook for the future of chronic low back pain management.

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