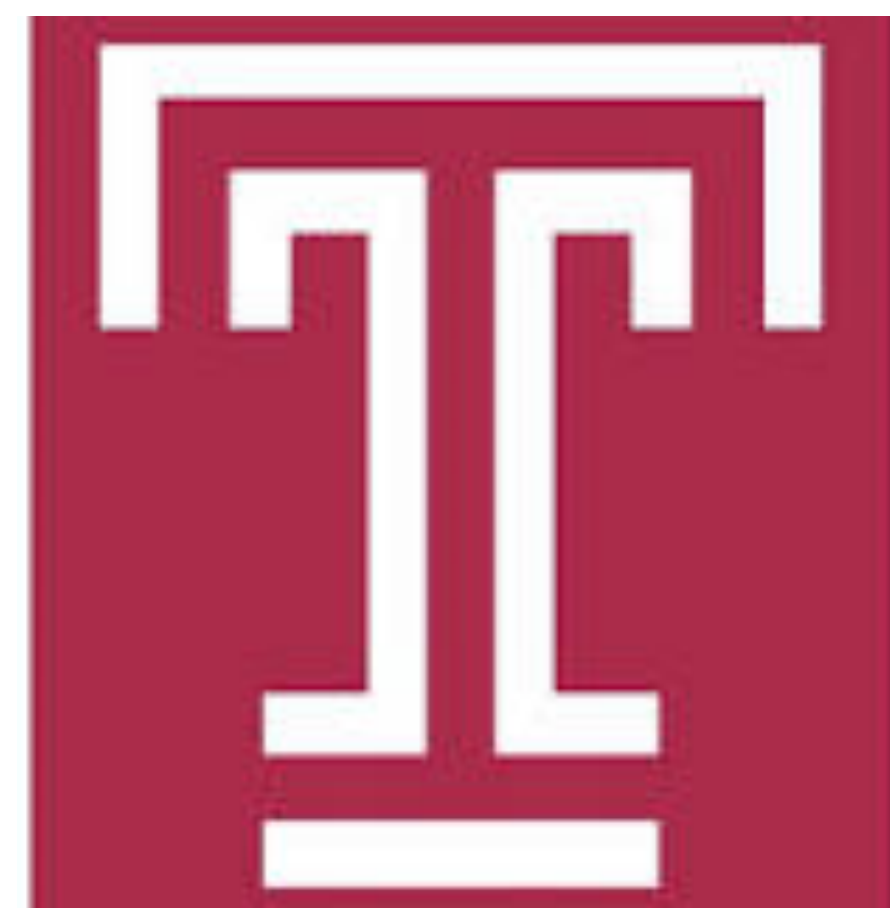




The Role of GLP-1 Agonists in Chronic Pain Management

A Potential Adjunct to Conventional Pain Management Therapy

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INTRODUCTION

Lower back pain is one of the most common symptoms experienced by patients. Some studies report that it is the most common cause of disability worldwide (1). Further, a growing obesity epidemic in the United States only stands to worsen the incidences of and difficulty treating lower back pain. In recent years, GLP-1 agonists have gained momentum and popularity as adjuncts to weight loss regimens. Studies have found significant clinical weight loss when combining GLP-1 agonists with lifestyle modifications when compared to lifestyle modifications alone (2). While pain medicine has interventions to assist with lower back pain, the pharmacologic adjuncts to said interventions are still limited. In this case, we discuss a patient who achieved significant improvement in her lumbar radicular pain while taking a GLP-1 agonist.

CASE PRESENTATION

- A 41 year old woman presented to the pain management clinic in late 2021 for initial evaluation
- Chief complaint of persistent, aching lower back pain radiating around her back to her bilateral buttocks
- PMHx significant for obesity, anemia, and Graves disease
- Physical examination notable for positive SLR at 30 degrees, notable low back TTP.
- Patient weight on initial evaluation was 230 lbs, and she was recently initiated on a GLP-1 agonist.
- MRI lumbar spine revealed mild right and left neuroforaminal stenosis at L4-5 and L5-S1

- Patient underwent interlaminar epidural steroid injections (ILESIs) and transforaminal epidural steroid injections (TFESIs) to lumbosacral spine
- Injections resulted in ~90% reduction of pain with functional improvements in ADL's; however, patient would need frequent repeat injections after ~6-8 weeks due to return of symptoms
- She remained on GLP-1 agonist over the subsequent 20-month period, with a resultant 55 lb weight loss (current weight is 175 lb)
- Concurrent lifestyle changes—dietary, increased physical activity, exercise program
- As her weight decreased, the intervals required between injections to maintain sustained pain relief incrementally increased.
- Patient currently consistently achieving 12 weeks of relief before requiring repeat injection
- Her use of a GLP-1 agonist has correlated with a significant increase in the amount of time she experiences relief from the injections.
- This marked improvement in response to therapy coinciding with her GLP-1 use raises the question about its potential role as an adjunct to chronic pain therapy.

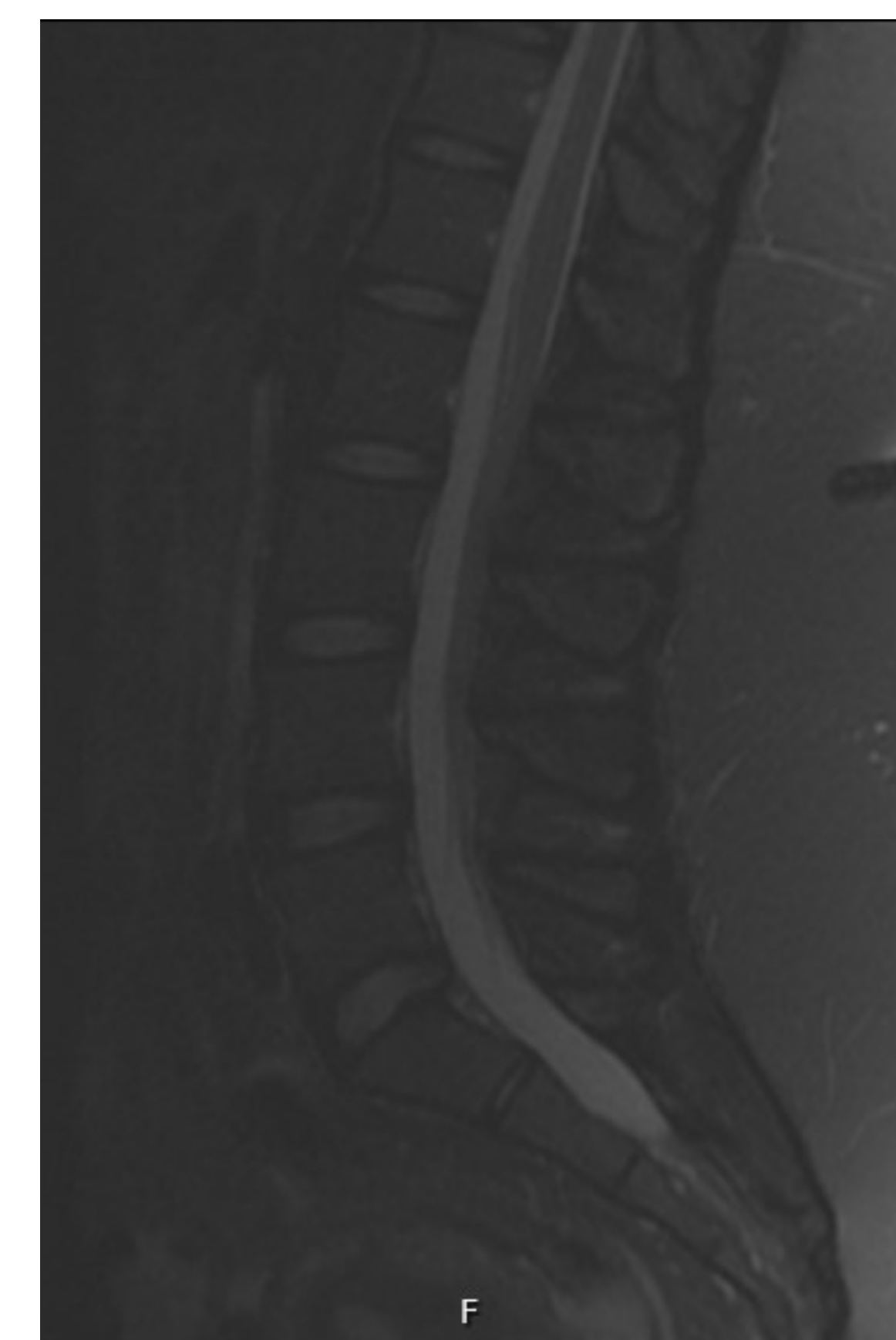


Figure 1: T2 weighted sagittal MRI of the lumbosacral spine demonstrating multilevel degenerative changes

DISCUSSION

- In this case, we focus on the longitudinal treatment of chronic lumbar radicular pain
- Response to ILESIs/TFESIs therapy and clinical relief was most notable when the therapy was combined with the effects of consistent GLP-1 agonist use

DISCUSSION

- GLP-1 agonists have gained considerable momentum in the weight-loss space due, most notably, to their clinical benefits and relatively minimal side-effects
- As these medications become more and more widely available, integrating them as an adjunct to chronic pain management therapy may be a prudent choice
- Identifying a new class of medications to add to our current multimodal analgesic regimen is beneficial in order to optimize pain relief and minimize potential side effects
- Further exploration into the effects GLP-1 agonists have on chronic pain is warranted
- Studies and randomized controlled trials analyzing the potential for GLP-1 agonists as adjuncts to a pain management program is a justified next step

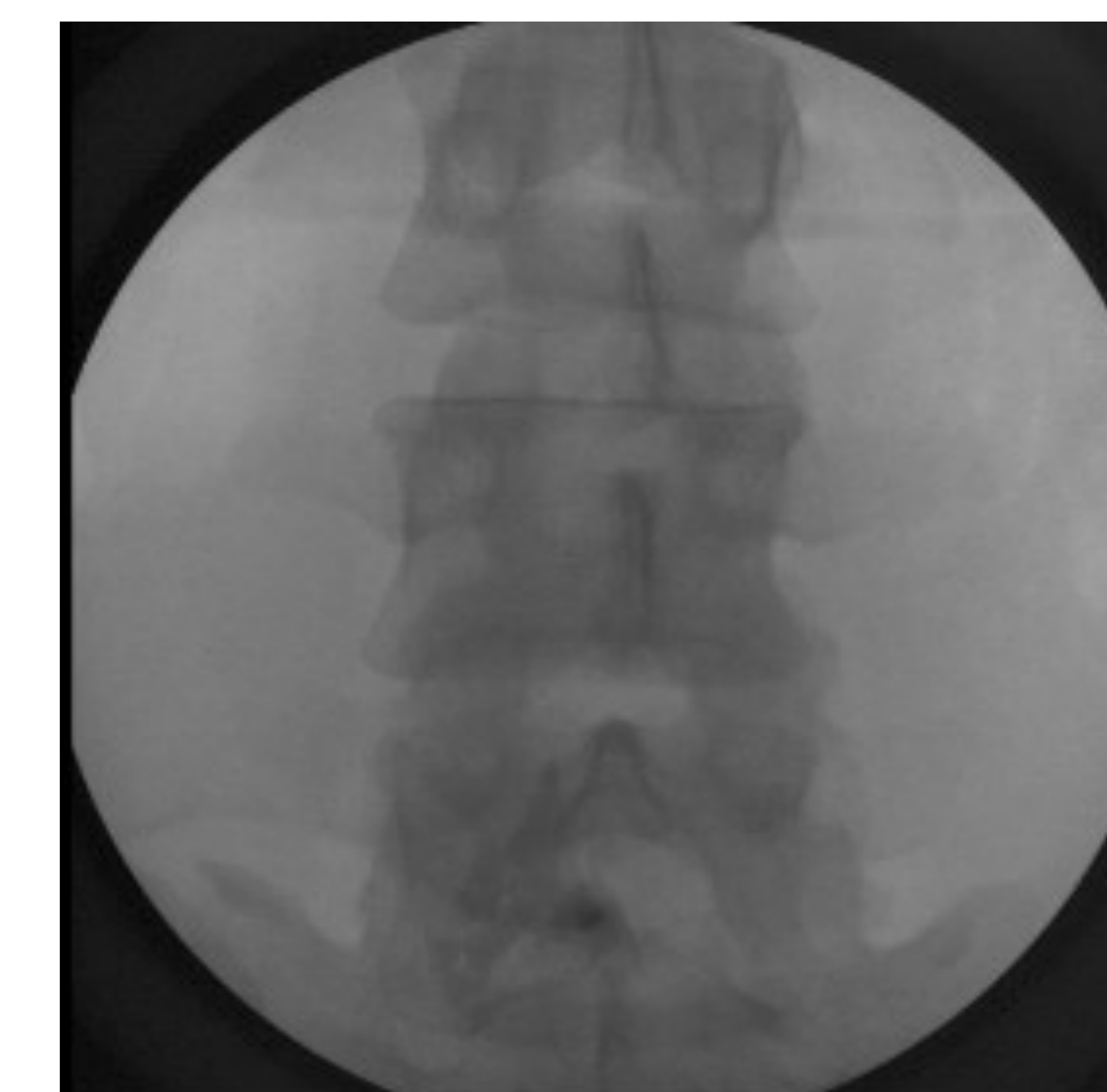


Figure 2: Fluoroscopic imaging from interlaminar epidural steroid injection at L5-S1

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