



# Improvement of Lumbar Epidural Lipomatosis with Weight Loss: Case Report

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## Abstract

A 61 year old female with a history of obesity, HIV, type 2 diabetes mellitus, hyperlipidemia, and hypothyroidism presented to our clinic with lower back pain and neurogenic claudication. MRI revealed severe Lumbar Epidural Lipomatosis (LEL). She then lost 40 pounds. Subsequent MRI revealed marked improvement of LEL and symptoms.

**Keywords:** Lumbar epidural lipomatosis; Spinal epidural lipomatosis; Weight loss; Lumbar stenosis; Neurogenic claudication

## Introduction

Lumbar Epidural Lipomatosis (LEL) is an accumulation of adipose tissue within the spinal canal. There are several described risk factors such as long-term steroid exposure whether exogenous or from endocrine abnormalities, exposure to Highly Active Antiretroviral Therapy (HAART), obesity, post-surgical and idiopathic [1,2]. The stenosis can become severe enough to cause neurogenic claudication or in extreme cases cauda equina syndrome [3,4].

Weight loss has been described as a potential treatment for symptomatic patients either through diet and exercise or bariatric surgery [5-8]. Those who have failed non-operative measures can be treated successfully with surgery, however the underlying cause of the LEL must always be taken into consideration in the treatment plan [9,10].

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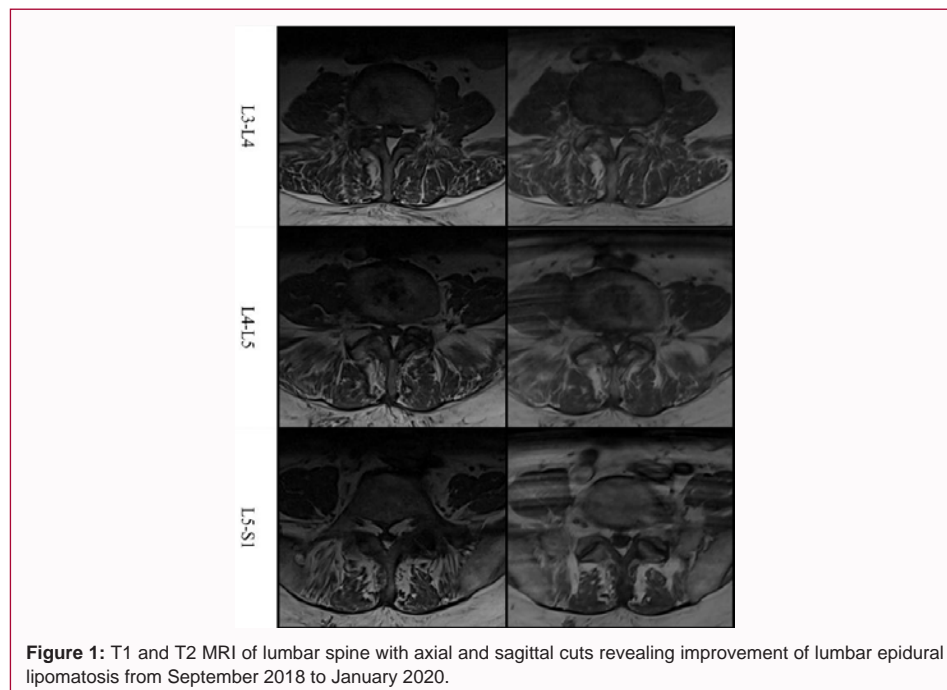
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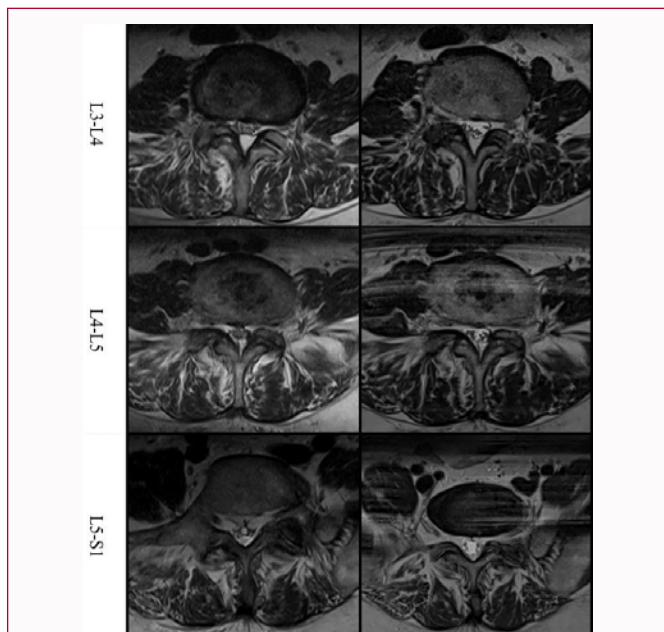
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## Case Presentation

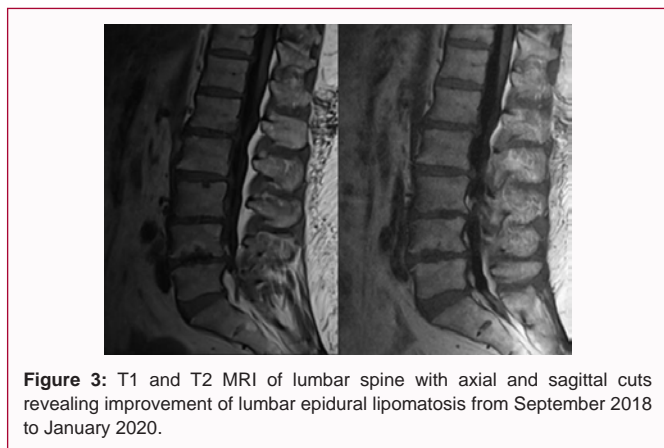
A 61 year old female with past medical history of morbid obesity (BMI 46), HIV w/undetectable



**Figure 1:** T1 and T2 MRI of lumbar spine with axial and sagittal cuts revealing improvement of lumbar epidural lipomatosis from September 2018 to January 2020.

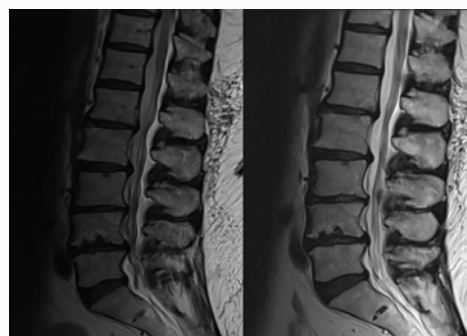


**Figure 2:** T1 and T2 MRI of lumbar spine with axial and sagittal cuts revealing improvement of lumbar epidural lipomatosis from September 2018 to January 2020.



**Figure 3:** T1 and T2 MRI of lumbar spine with axial and sagittal cuts revealing improvement of lumbar epidural lipomatosis from September 2018 to January 2020.

viral load due to active treatment, controlled type 2 diabetes mellitus, hyperlipidemia, and hypothyroidism presented to our clinic for one year of lower back pain and neurogenic claudication. On exam she had slight weakness to hip flexion but otherwise intact strength and sensation with no abnormal reflexes. MRI of her lumbar spine in September of 2018 showed epidural lipomatosis and degenerative disc disease with severe narrowing at L3-4, L4-5 and L5-S1 (Figure 1, 2). A trial of conservative treatment was recommended involving anti-inflammatory medication, therapy and a lumbar epidural spinal injection prior to surgical intervention. Patient was lost to follow up and presented again in January 2020 now complaining of thoracolumbar pain but with a normal exam. The leg weakness and leg pain had resolved since she lost about 40 lbs with diet and exercise. A repeat thoracic and lumbar MRI was obtained showing



**Figure 4:** T1 and T2 MRI of lumbar spine with axial and sagittal cuts revealing improvement of lumbar epidural lipomatosis from September 2018 to January 2020.

marked improvement of her LEL and spinal stenosis which fit with her clinical picture (Figure 3, 4). Thoracic MRI revealed mild degenerative changes without significant canal or foraminal stenosis.

Our findings are consistent with other case reports that reveal an improvement of radiographic and clinical presentation of lumbar stenosis due to LEL with moderate weight loss.

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