Introduction
Lumbosacral radiculopathy is a clinical pain syndrome due to irritation, tension on or compression of spinal nerves. Different etiologies can cause this condition, such as disc herniation, facet hypertrophy, ligamentum flavum hypertrophy, and presence of compressive cysts. It usually presents as low back pain that radiates along the dermatomal distribution of the involved spinal nerve. In addition, patients may present with paresthesia, hypesthesia, muscle weakness, or hyperesthesia.

There are different types of cysts that may present in the extradural space in the lumbar spine, specifically the spinal canal and neuroforamen. Common examples include synovial cysts, ganglion cysts, and Tarlov cysts. Patients with these lesions can present with lumbar radiculopathy.

Lumbar Discal Cyst (LDC) is a rare clinical entity with unknown etiology that can cause lumbar radiculopathy. The clinical picture and imaging characteristics can be easily confused with cyst types. Here we describe a case of symptomatic LDC that was treated microsurgical resection.

Case Presentation
A 24-year-old female patient who presented with lower back and leg pain for 6 months duration. The patient started suffering from back pain while doing laundry. She described the pain as sharp shooting pain that started in the low back, travelled along the lateral aspect of the thigh and terminated at the knee. Initially, the pain was treated empirically with nonsteroidal anti-inflammatory drugs and intramuscular steroid injection which resulted in short term improvement. Later on, the patient started having tingling of the lateral aspect of the left thigh. The new sensory changes and failure of conservative management lead the patient to have magnetic resonance imaging (MRI) of the lumbar spine 6 months after the initial presentation. The MRI showed a left sided extradural cyst at the level of L4-S1 lumbar vertebra (L4-5). The cyst was hypointense and hypointense on T1 and T2 weighted images, respectively [Fig.1].

In addition, the patient underwent a computed tomography (CT) myelogram which showed scalloping of the posterior vertebral body of L4 and no filling of the cyst with contrast [Fig. 2]. On physical exam the patient had weakness of the left extensor hallucis longus (4+/5 motor power).

The patient underwent a minimally invasive microscopic resection of the cyst. Postoperatively, she had immediate improvement in her symptoms. Histopathological analysis showed fibrosis and hemosiderin deposition within the cyst wall and absence of epithelial lining [Fig.3]. At 6 weeks follow up visit her pain completely resolved and she had normal neurological exam.

Fig. 1 [A] MRI T-2 sequence of lumbar spine (axial view) shows the left sided hyperintense cystic lesion behind the L4 vertebral body (arrow). [B] MRI T-2 sequence of lumbar spine (sagittal view) shows the hyperintense cystic lesion behind the L4 vertebral body (arrow).

Fig. 2 CT myelogram of the lumbar spine shows the left sided cystic lesion with scalloping of the posterior vertebral body (arrow) with no contrast filling.

Fig. 3 Histopathology picture shows fibrosis and absence of epithelial lining of cyst wall (H&E, 10x).

Conclusion
Lumbar discal cyst is a rare clinical entity that was recently described. The exact pathogenesis of this condition remains unclear. If symptomatic, LDC usually presents with lumbar radiculopathy. On imaging, it can be confused with other cystic lesions of the lumbar spine. Several treatment options have been described, most resulted in regression of the cyst and subsequent resolution of symptoms.

Initial conservative therapy with surgery reserved for patients who fail conservative management can be used.

References