

Epidural Varicose Vein Mimic Disc Prolapse and Causing a Severe Radicular pain: A Case Report

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Abstract

Venous varicose of epidural is considered a rare cause of nerve root and the cal sac compression and impingement that leads to lower limb radiculopathy. The purpose of this study is to draw attention to this problem during operation. It also aims to focus shed a light on using magnetic resonance imaging (MRI) before the operation. This research also attempts to evaluate the outcome of the surgery.

Symptoms of epidural varicose with radiculopathy are rare and the diagnosis is often inaccurate by preoperative clinical examination and radiology investigations. Thus, in many cases, the diagnosis is made intraoperatively.

The case was a 40 years old female who consulted our outpatient clinic complaining from acute radicular pain in the lower back and down of her right lower limb. MRI was done for her and showed paracentral disc herniation. Intraoperatively, abnormal dilatation of epidural vein impingement on L4 nerve root with no foraminal Stenosis is as seen. We initiated a thermo coagulation of the epidural vein from proximal to distal ends at the disc level and used a gel foam patch to control bleeding that was removed all at the end of the operation. Then, coagulation ablation was performed. The operation resulted in relief of symptoms and neurologic recovery occurred during the follow-up period. According to our case and previously published case reports, the outcome is good with the recovery of neurological signs and symptoms that can be obtained by coagulation ablation of epidural varicose vein.

Keywords: Lumber Epidural Varicose Vein; MRI; Minimal Invasive Surgery; Radicular Pain

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Introduction

Common symptoms of disc herniation or spinal stenosis are back pain and radiculopathy. The symptoms also include those related to ischemic injury of the neural structure, compression, and inflammatory changes [1]. Previous studies show that varicose of epidural vein rarely causes radicular pain [2-4]. Some studies show that lumber (L) epidural varicose vein happens in 0.67% - 1.2% [5].

Our case is a lumber epidural varicose vein at L3-L4 level with severe pain and mild weakness in the right leg. A microscopic laminotomy, flavectomy and nerve root retraction were done and we demonstrated 1 cm diameter dilated varicose vein.

Case Report

A 40 years old female was referred by her general practitioner to our neurosurgery outpatient clinic. She described symptoms of bilateral lower limb numbness, severe pain with VAS score 7 and mild weakness in the right leg. Deep tendon reflex was normal and distal dorsalis pedis arteries were patent. All laboratory results were normal. MRI for the lumbar spine was done and the radiologist report gave a description of a lumbar disc prolapse at level L3-L4 (Figure 1).

Procedure

Patient underwent microscopic surgery with skin incision of 1.5 cm paramedian and 2 cm length over L3-L4-disc level determined by fluoroscope c-arm. Sequential dilator was used for fascia incision and to separate muscles without cutting. RT laminectomy, flavectomy and nerve retraction were performed and showed no disc fragment but a large dilated vein of about 1 cm width (Figure 2).

Results

Pain improved immediately after surgery, while numbness and



Figure 1: (a) An MRI sagittal view while (b) is transverse view, both clearly show L3-L4 disc prolapse.



Figure 2: Intra operative view, small arrow points to ligamentum flavum, while the large arrow points to L4 nerve root, the 3 white lines directed toward enlarged varicose vein.

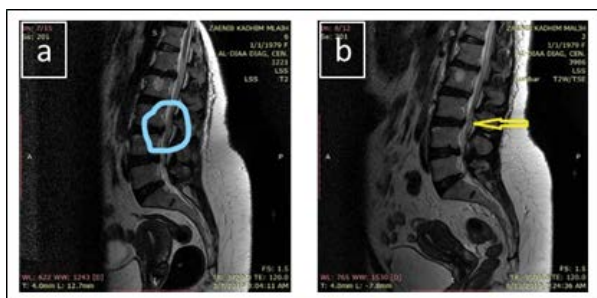


Figure 3: MRI showing recovery of lesion, (a) after 2 months while (b) after 5 months.

weakness alleviated gradually. Complete improvement occurred after two months. Follow up MRI were obtained after two and five months with a full recovery from the lesion as seen in figure 3.

Discussion

The pathogenesis of epidural varicose vein of lumbar spine is not very clear, it may occur because of enlargement of vertebral venous plexus. It is believed that two etiologies might be responsible, the first is the increase in the venous pressure in vein lacking valves. The second is blocking blood flow to vena cava [6]. Intra-abdominal pressure can increase due to pregnancy, obesity, and intra-abdominal mass. All can increase the inferior vena cava pressure and dilate spinal epidural veins [7]. Lumbar epidural varicose vein could cause radiculopathy and myelopathy, although this cause is quite rare and usually diagnosis occurs intraoperatively [8]. Thrombosed epidural varicose veins are

usually confused with herniated nucleus pulposus on preoperative MRI [9].

When symptomatic and conservative management fails and no significant neurological deficits, lumbar varicose vein can be best treated by surgery [10,11]. Laminectomy, excision and bipolar thermocoagulation can be performed during surgery [12]. In this case, no abnormalities were reported and laminotomy and bipolar thermocoagulation were quite sufficient to treat this condition.

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