

# Case Report of Hemoperitoneum from Discal Hemorrhage

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**Abstract**— We report a case of hemoperitoneum arising from a ruptured lumbar intervertebral disc in a 30-year-old male patient with a history of epilepsy, chronic alcohol use, and smoking. Though treated surgically, the patient's neurological deficits did not recover fully due to the prolonged compressive effect of blood clots in the peritoneal cavity. This case highlights the dangers of risk factors, non-adherence, and diagnostic delays in complex spinal patients. Close monitoring, multidisciplinary management, and health-promoting lifestyle changes are essential to optimizing outcomes and minimizing catastrophic complications. Strict compliance with medical advice and immediate reporting of concerning symptoms can save lives by enabling prompt diagnosis and emergency care. Though spinal injuries themselves result in a high burden of disability and poor quality of life, avoidable factors substantially worsen prognosis and recovery. We aim to emphasize through this report the critical importance of mitigating threats to management and optimizing the limited benefits of treatment. Teamwork across specialties is required, from physicians and surgeons to rehabilitation specialists, patients, and families. Alcohol/tobacco cessation and long term compliance with medication/follow-up plans are mandatory even after the acute threat has passed. This case sparks increased awareness of the life-and-death consequences of non-adherence, risk taking, and diagnostic delays in the complex patients who compromise a crucial yet vulnerable segment of the population. With diligence, catastrophic complications can be prevented, but close monitoring remains crucial life-long.

**Keywords**— Hemorrhage; Lumbar vertebrae; Outcome and process assessment; Risk factors; Spinal cord injuries.

## I. INTRODUCTION

Hemorrhage from ruptured intervertebral discs is an uncommon but dangerous complication that can quickly become life-threatening if not diagnosed and addressed promptly<sup>1</sup>. We report a case of hemoperitoneum arising from a ruptured lumbar disc in a 30-year-old male patient with a history of epilepsy, chronic alcohol use, and smoking.

Though treated surgically, the patient's neurological deficits did not recover fully due to the prolonged compressive effect of blood clots in the peritoneal cavity<sup>2</sup>. This case highlights the importance of caution, compliance, close monitoring, and early intervention in at-risk patients with spinal pathologies. Risk factor modification is essential but must be followed consistently to optimize outcomes and minimize catastrophic complications.

Spinal injuries already confer a high risk of disability, pain, and poor quality of life. Avoidable aggravating factors like alcohol/tobacco use and non-adherence to medical advice pose additional threats to the management and recovery of such patients<sup>3</sup>. We aim to emphasize the need for health-promoting lifestyle changes and vigilant follow-up in these complex cases through this report. Strict adherence to treatment plans and timely reporting of any concerning symptoms can save lives by enabling immediate diagnosis and emergency care<sup>4</sup>.

It is our hope that this case sparks increased awareness around the dangers of risk factors, non-compliance, and delayed treatment in patients with spinal pathologies. Close teamwork of physicians, surgeons, rehabilitation specialists,

patients, and families are required to achieve the best possible outcomes and prevent life-threatening complications.

## II. CASE PRESENTATION

A 30-year-old male presented to the hospital with a history of epilepsy, alcoholism, and smoking. He presented with abdominal pain and inability to move his left leg after a fall and injury 3 days prior. On examination, there was tenderness over the left knee joint and lower abdomen. Magnetic Resonance Imaging (MRI) revealed a ruptured disc in the lumbar spine causing hemoperitoneum from intra-abdominal bleeding.

The patient has been treated for epilepsy with phenytoin for 3 years. However, he continues to drink alcohol daily and smoke half a pack of cigarettes per day despite medical advice. After a fall from standing height, he developed pain over the left knee and abdomen which gradually worsened. He went to a local clinic where an X-ray was taken, showing no fractures. He was prescribed pain medications and discharged.

The abdominal pain and leg weakness prompted him to come to our hospital. An MRI revealed a ruptured L4-L5 disc with extravasation of disc material into the peritoneal cavity, resulting in hemoperitoneum. An emergency laparotomy was performed, evacuating 2 liters of blood clots from the peritoneal cavity. The ruptured disc fragment was cleared, and the abdominal cavity was thoroughly washed. Though the bleeding was controlled, his neurological deficit did not recover due to long-standing compression on the nerves.

This case highlights the need for avoidance of high-risk behaviors in patients with spinal injuries or surgeries. Prompt diagnosis and surgical intervention could have prevented life-threatening complications like hemoperitoneum. Patients with

neurological deficits post-surgery should follow up regularly and report any new symptoms immediately. Early warnings signs must not be ignored to provide optimal management of such complex cases.

#### A. Differential diagnosis

The abdominal pain and neurological deficit could also be due to spinal stenosis<sup>5</sup>, herniated nucleus pulposus<sup>6</sup>, spinal fracture, or abscess. An MRI ruled out these differentials and confirmed hemoperitoneum from a ruptured disc.

#### B. Treatment

After evacuating the hemoperitoneum, we irrigated and suctioned the abdominal cavity thoroughly. Though the neurological deficit did not improve, emergency surgery likely saved the patient's life by preventing shock. Pain management and care were provided post-operatively. Due to persistent deficits, rehabilitation will be required.

#### C. Implications

Patients with spinal injuries or surgeries are at high risk of life-threatening complications. Hemoperitoneum can quickly become fatal without prompt diagnosis and treatment. Close monitoring of at-risk patients is crucial.

### III. KEY LEARNING POINTS IN THIS CASE

The key learning points from this case presentation are:

- Risk factor modification, especially alcohol/tobacco use cessation, is essential in spinal patients.
- Patients must be counseled on the importance of following up regularly and reporting any concerning symptoms immediately.
- Early warnings like new or increasing pain should never be ignored.
- Hemoperitoneum requires prompt surgical intervention for an optimal outcome, highlighting the need for immediate diagnosis.
- Rehabilitation and physical therapy can aid recovery from neurological deficits but must be started early.
- Long term health management and medication compliance are mandatory even after treatment. Lack of compliance likely contributed to this severe complication.

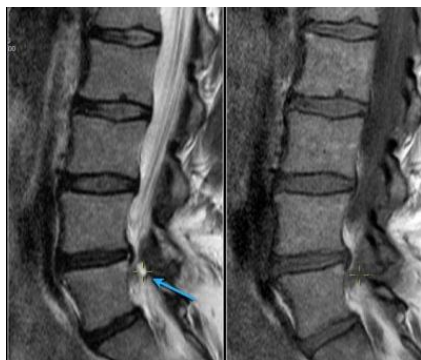


Fig. 1. MRI scan indicating a ruptured L4-L5 disc.

### IV. CONCLUSION

In conclusion, this case of hemoperitoneum from a ruptured lumbar disc underscores the importance of risk mitigation, compliance, monitoring, and multidisciplinary management in spinal patients. These patients face significant suffering and disability that can be worsened by avoidable factors. While treatment provides limited benefit, vigilant surveillance can maximize benefits and prevent catastrophic deterioration. A collaborative team approach involving physicians, surgeons, physical medicine specialists, patients, and families is necessary for optimal outcomes. Timely reporting of symptoms and adherence to health-promoting practices are crucial for preserving life and function. Life-threatening complications of spinal pathologies should be aggressively addressed through diligent follow-up and optimized management. This report aims to increase awareness of the challenges faced in these complex cases and emphasizes the importance of close monitoring and timely intervention.

### ACKNOWLEDGMENT

The authors would like to thank Dr. K. Ravishankar for his valuable support and efforts in this case.

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