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Retroperitoneal Hematoma Following Lumbar Injection in a Patient Receiving Clopidogrel: A Case Report

Ah Yeon Lee, MD[1], Kyung Hyun Park, MD[1], Jong In Lee, MD, Ph.D[1]
1 Department of Rehabilitation Medicine, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea

INTRODUCTION

Lumbar spine injections are commonly used to manage spinal and radicular pain and have included techniques with varying anatomic depth and bleeding risk. Although hemorrhagic complications are rare, lumbar injections **in patients receiving antiplatelet therapy**—particularly when multiple deep lumbar procedures are performed—may result in clinically significant **bleeding and neurologic injury**. We report a case of a 56-year-old man **receiving clopidogrel** who underwent a **lumbar medial branch block and a psoas compartment–related block** during the same session and subsequently developed a **retroperitoneal hematoma.**

CASE REPORT

A 56-year-old man with a history of transient ischemic attack secondary to right distal internal carotid artery stenosis, hypertension, and dyslipidemia had been receiving **clopidogrel** continuously. He had been diagnosed with L4–5 spinal stenosis and undergone two prior lumbar injections. For persistent back pain, he underwent a third posteriorly approached lumbar injection procedure consisting of **bilateral L4–5 medial branch blocks with an accompanying psoas compartment block. Approximately 12h after the procedure, the patient developed progressive pain extending from the left lower back to the left flank**

Clinical course

- **BP 90/74 mmHg HR 132/min Hb 13.6 g/dL -> 8.4 g/dL**

Imaging

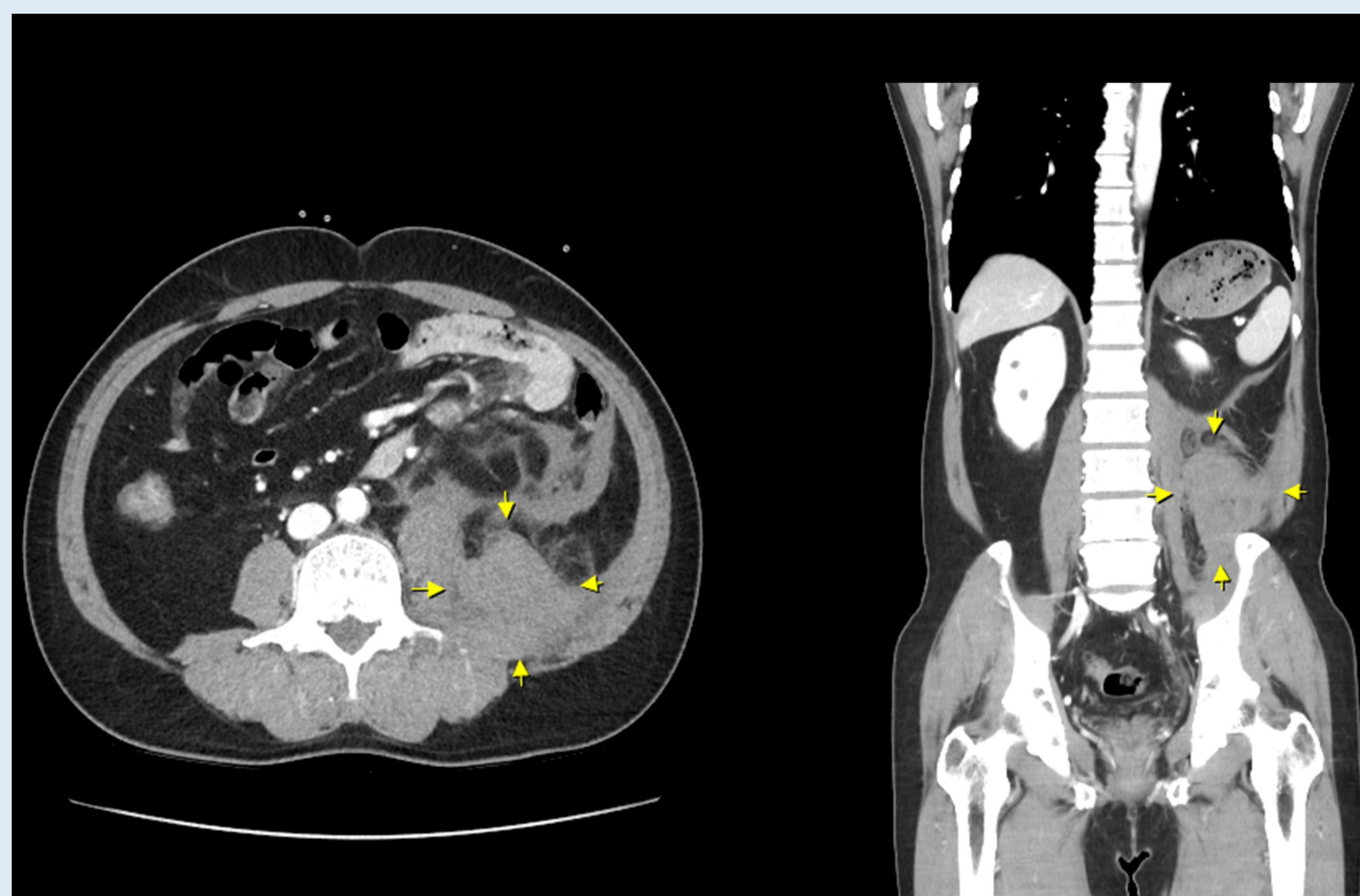
- CT: Lt. retroperitoneal hematoma
- Angiography: active bleeding from **Lt. iliolumbar artery**

Intervention

Glue-lipiodol (1:4) embolization

Neurologic Findings

Lt. hip flexor & knee extensor weakness (MRC 2–3/5)
Sensory loss: Lt. anterior thigh



Follow-up & electrophysiological course

Persistent femoral neuropathy progressed to **upper lumbar plexopathy** with incomplete recovery despite 2-year follow-up

Results of nerve conduction study

Nerve		Stimulation site	Latency (ms)	Amplitude
Motor	Rt femoral (VM recording)	Above inguinal ligament	4.98	10.4 mV
	Lt femoral (VM recording)	Above inguinal ligament	**No potential**	**No potential**
Sensory	Rt Lateral femoral cutaneous	Inguinal ligament	2.65	10.5 μV
	Lt Lateral femoral cutaneous	Inguinal ligament	2.79	**3.9 μV**
	Rt saphenous	Medial leg	3.46	11.2 μV
	Lt saphenous	Medial leg	3.81	**4.4 μV**

Results of needle electromyography

		Denervation potential			
Muscle	Insertional activity	Fibs	PSWs	MUAP	Interference pattern
Lumbar paraspinalis	Normal	-	-	-	-
L Iliopsoas	Normal	-	-	-	**Reduced**
L Adductor longus	Normal	-	-	-	**Reduced**
L Rectus femoris	Normal	**2+**	-	**Polyphasic**	**Reduced**
L Vastus lateralis	Normal	**1+**	**2+**	**Polyphasic**	**Reduced**
L Tibialis anterior	Normal	-	-	-	Full
L Gluteus maximus	Normal	-	-	-	Full

VM = vastus medialis, Rt = right, Lt = left, mV = millivolt, μV = microvolt.
Fibs = fibrillation potentials, PSWs = positive sharp waves, MUAP = motor unit action potentials, L = left.
Table 1. Results of nerve conduction study & needle electromyography)

DISCUSSION

Our case illustrates that combining high–bleeding-risk procedures, such as **a psoas compartment block**, with other lumbar interventions under **uninterrupted clopidogrel therapy** can lead to clinically **significant retroperitoneal hemorrhage and enduring neurologic sequelae**. It emphasizes the need for **procedure-specific risk stratification, cumulative bleeding risk assessment, and long-term electrophysiological monitoring** in patients undergoing lumbar injections while receiving antiplatelet therapy.