

A Case of Iliopsoas Hematoma in a Patient on Acenocoumarol

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ABSTRACT

The iliopsoas hematoma is a rare condition that can result from various factors, such as trauma, anticoagulant use, iatrogenic injury during lumbar procedures, and bleeding disorders. Bleeding complications are expected to become more common with the increasing use of anticoagulants. We present the case of a 53-year-old female with a known history of Chronic Rheumatic Heart Disease (CRHD) and Mitral valve Stenosis (MS), who had previously undergone Mitral Valve Repair (MVR). Since then, she had been on oral Acenocoumarol therapy. Over time, her prothrombin time and International Normalized Ratio (INR) gradually became deranged. The patient's condition stabilized after reducing the dose of Acenocoumarol.

Keywords: Acenocoumarol, Anticoagulants, Iliopsoas Hematoma, International Normalized Ratio.

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INTRODUCTION

Iliopsoas hematoma is a rare condition that can result from several causes, including trauma, anticoagulant therapy, lumbar procedures, and bleeding disorders.¹ With the increased use of anticoagulants and antiplatelet drugs, bleeding complications have become more common. Studies show that a small percentage (1-7%) of patients receiving anticoagulant treatment may experience bleeding complications annually. Although this condition is most frequently seen in patients with hemophilia, those on anticoagulants for other health conditions may also develop iliopsoas hematoma.

The hematoma can compress nearby structures, particularly the femoral nerve, leading to symptoms such as severe pain, muscle weakness, and, in some cases, nerve dysfunction. Clinical signs of iliopsoas hematoma can be vague and often overlap with other conditions, including neurological and musculoskeletal disorders. Symptoms may include tingling, numbness, and weakness in the thigh or leg, often due to nerve compression. Additionally, swelling in the affected area, limited mobility, and signs of anemia or hypovolemia may be present in more severe cases.²

Imaging techniques like Computed Tomography (CT) are highly effective for confirming the diagnosis of iliopsoas hematoma. Treatment depends on the severity of the condition. Mild cases

are managed conservatively with bed rest, correction of the underlying coagulopathy, and discontinuation of anticoagulant medications. For more severe cases or when patients are hemodynamically unstable, interventions like transcatheter arterial embolization or surgery may be necessary to stop active bleeding and prevent further complications.³

CASE REPORT

A 53-year-old female patient was admitted to Ekashilaa Hospital, Warangal, Telangana, with complaints of severe pain in the Right Iliac Fossa (RIF) region radiating to the right lower limb, associated with swelling. She was under the supervision of Dr. D. Ashok Kumar, MD (General Medicine). The patient is a known case of Chronic Rheumatic Heart Disease (CRHD) with Mitral valve Stenosis (MS) and had undergone Mitral Valve Replacement (MVR) 8 months ago. Since then, she had been on oral Acenocoumarol 2 mg OD and Metoprolol 25 mg OD.

Upon examination, the patient was conscious and coherent, with a normal body temperature. Her blood pressure was 150/90 mmHg, pulse rate was 94 beats/min, respiratory rate was 20 breaths/min, and oxygen saturation was 98%. Bilateral breath sounds were equal (BAE+), heart sounds S1 and S2 were normal, the abdomen was soft on palpation, and her GRBS was 168 mg/dL.

The patient was admitted and evaluated further. On Day 1, a complete blood picture revealed anemia with hemoglobin of 8.8 g/dL and leukocytosis with a Total Leukocyte Count (TLC) of 13,100 cells/ μ L. A CECT abdomen performed for abdominal



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pain showed a bulky right iliacus muscle with an intramuscular hematoma (~7-8 cm), as depicted in Figure 1.

A venous Doppler study of the right lower limb was performed, and the findings were negative for deep vein thrombosis (DVT), with mild subcutaneous inflammatory changes in the distal leg and foot. A 2D echocardiogram revealed CRHD, S/P MVR with a prosthesis functioning well, in situ with minimal gradients, good RV/LV function with an ejection fraction of 66%, no RWMA, mild MR, no AR, no TR, no PAH, no PE, and no clots. The ECG indicated probable left atrial enlargement, RSR in V1 or V2, Right Ventricular Conduction Delay (RVCD) or RVH, and an old inferior infarct. Tests for renal and liver function were within normal limits.

On Day 1, the Activated Partial Thromboplastin Time (APTT) was 92.7 sec, Prothrombin Time (PT) was 87.0 sec, with a control PT of 13.0 sec, and the International Normalized Ratio (INR) was 7.0. The PT and INR values gradually improved, as shown in Table 1.

The treatment plan for this patient, as indicated in Table 2, included Inj. Vitamin K, Inj. Lasix, Inj. Tramadol, Inj. Pantop, Tab. Prolomet-XL, Tab. Dolo, and a transfusion of 1 pint of Packed Red Blood Cells (PRBC) to manage anemia. Inj. Vitamin K was administered to treat the bleeding complication induced by Acenocoumarol. Before initiating Vitamin K therapy, Tab. Acitrom was discontinued. The patient, who was previously on Tab. Acitrom 2 mg OD, had her dose reduced to 1 mg daily.

The patient's condition stabilized after the dose adjustment of Acenocoumarol. The INR levels normalized, and the patient was discharged. The treatment advised at discharge included Tab. Pantocid 40 mg OD for 5 days, Tab. Ultracet-P BD for 5 days, Tab. Hbloy OD for 1 month, and continuation of Tab. Acitrom 1

mg OD, Tab. Prolomet-XL 25 mg OD, and Tab. Dylor 5 mg OD. A specific Acitrom diet was also advised.

DISCUSSION

Coumarin Oral Anticoagulants (COAs) are a class of 4-hydroxycoumarins that include an aromatic substituent at position 3 and have anticoagulant effects. Commercially available coumarins include acenocoumarol, phenprocoumon, and warfarin. Among these, acenocoumarol (marketed as Acitrom) is the most widely used oral anticoagulant in India due to its numerous indications.

The International Normalized Ratio (INR) and prothrombin time are monitored, and dosages are adjusted as necessary to achieve and maintain the ideal anticoagulant effect. An INR of 4 or higher is associated with an increased risk of bleeding, while an INR of less than 2 is linked to a higher risk of thromboembolism.⁵

The Vitamin K Antagonist (VKA) family of anticoagulants, including acenocoumarol, is widely used for the treatment and prevention of several conditions, such as valvular heart disease, atrial fibrillation, and pulmonary embolism. These medications remain commonly used in many healthcare systems due to their low cost. It has been reported that the incidence of bleeding episodes related to VKAs is approximately 5.1%, with cerebral and gastrointestinal hemorrhages being the most common. The risk of significant bleeding increases with higher INR values. For instance, an INR ≥ 5.0 increases the risk of bleeding by 3.6 times compared to an INR ≤ 2.6 .⁶

In this case, the patient's INR was 7.0, necessitating a reduction of the acenocoumarol dose to 1 mg daily. The patient was also treated with a Proton Pump Inhibitor (PPI), a diuretic, and a transfusion of one pint of Packed Red Blood Cells (PRBC) to

Table 1: Laboratory investigations data.

Sl. No.	Tests	Day-1	Day-2	Day-3	Day-4
1	Prothrombin time (sec)	87.0	19.7	19.5	19.5
2	Control test (sec)	13.0	13.0	13.0	13.0
3	INR	7.0	1.58	1.56	1.54

Table 2: Patients Medication Chart.

Sl. No.	Drug	Generic name	Dose	Frequency	ROA
1	Inj. Vitamin K	Phytonadione	10 mg	OD	IV
2	Inj. Lasix	Furosemide	10 mg	BD	IV
3	Inj. Tramadol	Tramadol	50 mg	BD	IV
4	Inj. Pantop	Pantoprazole	40 mg	OD	IV
5	Tab. Acitrom	Acenocoumarol	1 mg	OD	PO
6	Tab. Prolomet-XL	Metoprolol	25 mg	OD	PO
7	Tab. Dolo	Acetaminophen	650 mg	TID	PO

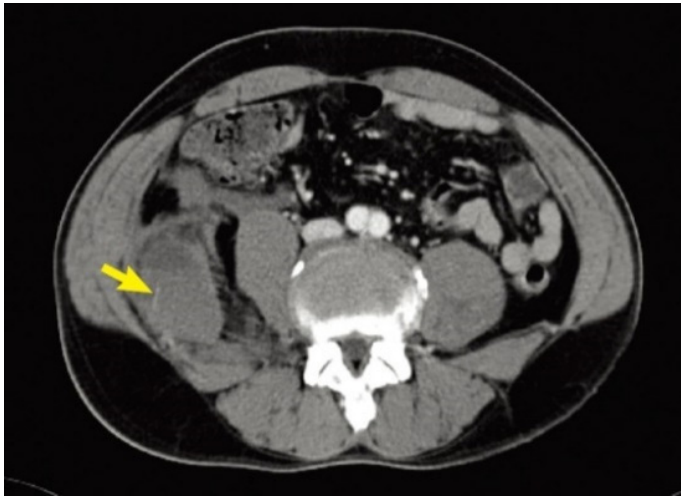


Figure 1: CECT of abdomen showing hematoma in right iliopsoas muscle.⁴

manage anemia. After dose adjustment, the patient's condition stabilized, and they were subsequently discharged.

For spontaneous iliopsoas hematomas, there is no standardized treatment protocol. Management ranges from conservative measures to radiological or surgical interventions. The choice of therapy depends on factors such as the cause, hematoma volume, timing of diagnosis, and degree of neurological impairment.

A conservative approach, including bed rest and correction of coagulopathy with vitamin K and Fresh Frozen Plasma (FFP), is effective for patients presenting with lower abdominal, flank, back, or thigh pain, minimal neurological symptoms, and small-volume hematomas without hemodynamic instability. In most cases, this ensures spontaneous absorption of the hematoma.

For large hematomas, patients with unstable hemodynamic status, or those with significant neurological deficits, rapid surgical decompression and control of bleeding vessels, combined with Vitamin K, FFP, and blood transfusions, may be required. Ultrasound- or CT-guided percutaneous aspiration and drainage of the hematoma may be an alternative for patients unsuitable for open surgery. Additionally, arterial embolization can be life-saving in hemodynamically unstable patients with active arterial bleeding visible on CT angiography, provided the facility is available.⁷

CONCLUSION

Patients with mechanical heart valves who are on a stable dose of oral anticoagulants should undergo monitoring every four weeks, and any non-healing wounds should be promptly addressed. The primary risk associated with oral anticoagulant therapy is bleeding. Managing severe bleeding caused by acenocoumarol in patients with artificial heart valves can be challenging. However,

significant complications can be prevented through proper education and early detection of symptoms.

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ETHICAL APPROVAL AND CONSENT TO PARTICIPATE

The study was approved by the institutional ethics committee.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

RIF: Right iliac fossa; **CRHD:** Chronic rheumatic heart disease; **MS:** Mitral valve stenosis; **MVR:** Mitral valve replacement; **APTT:** Activated partial thromboplastin time; **INR:** International Normalized Ratio.

SUMMARY

Coumarin oral anticoagulants (COAs), such as acenocoumarol, phenprocoumon, and warfarin, are widely used to prevent and treat conditions like atrial fibrillation, valvular heart disease, and pulmonary embolism. Monitoring INR is crucial, as levels ≥ 4 increase bleeding risk, while levels < 2 raise thromboembolism risk. In one case, a patient with an INR of 7.0 was managed by reducing acenocoumarol to 1 mg daily, administering PPIs, diuretics, and a blood transfusion, resulting in stabilization and discharge. Spontaneous iliopsoas hematomas lack a standard treatment but can be managed conservatively with bed rest, vitamin K, and FFP for small, stable cases. Large hematomas or those with hemodynamic instability may require surgical decompression, arterial embolization, or image-guided drainage. Treatment depends on the severity and clinical presentation.

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