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## INTRODUCTION

- Anterior Communicating Artery (ACoA) Paraparesis Syndrome is a rare presentation after a subarachnoid hemorrhage of the ACoA presenting similarly to an anterior cerebral artery territory infarct.

## CASE PRESENTATION

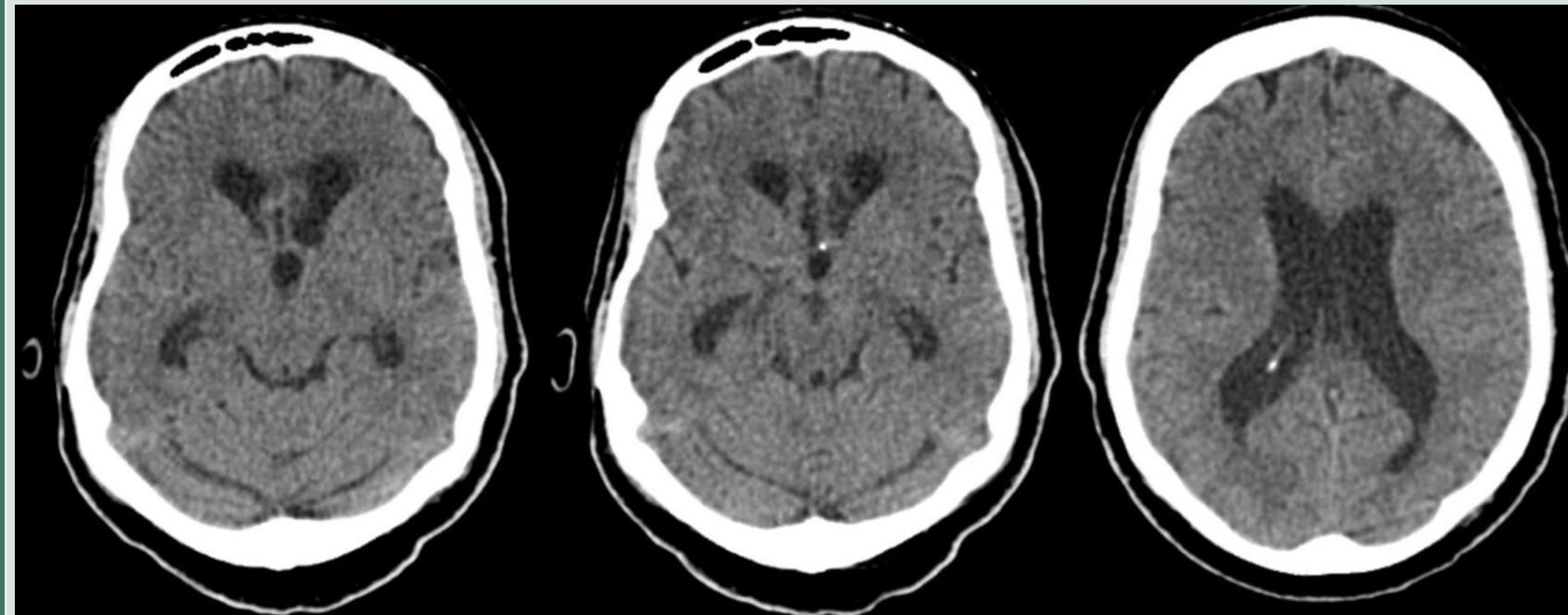
- A 59-year-old male awoke with a severe headache and a GCS of 7 on admission.
- Imaging revealed a diffuse subarachnoid hemorrhage. Cerebral Angiogram revealed a 3 x 2 x 1.5 mm anterior communicating artery (ACoA) A1 segment and a 2 x 2 x 1.7 mm carotid terminus aneurysm managed with coiling.
- Interestingly, the patient had transcranial dopplers without any significant intracranial vasospasms.
- Upon initial presentation to inpatient rehabilitation (IPR) he had bilateral 1/5 hip flexion and knee extension strength and 3/5 ankle plantarflexion and dorsiflexion strength.
- He was transferred to acute care for a hypo-aroused state and returned to IPR 17 days from initial IPR presentation with improved strength – 2/5 hip flexion, 3/5 knee extension, and 4/5 ankle plantarflexion and dorsiflexion.

## ADVERSE EVENTS

- Course was complicated by encephalopathy, hydrocephalus, possible seizure activity, and deep vein thromboses requiring IVC filter and later lower extremity thrombectomy and IVC filter removal secondary to heavy clot burden.
- On return to IPR, he continued to have impulsivity and hypo-aroused episodes.

## IMAGES

CT head without contrast during IPR



Manual Muscle Testing Differences Between IPR Admissions

	Day 1 of IPR		Day 18 Return to IPR	
	Right	Left	Right	Left
Shoulder Abduction	5	4+	5	5
Elbow Flexion	5	4+	5	5
Elbow Extension	5	4+	5	5
Wrist Extension	5	4+	5	5
Grip	4	4	4	4
Hip Flexion	1	1	2	2+
Knee Extension	1	1	3	4
Dorsiflexion	3	1	4+	4+
Plantarflexion	3	3	4+	4+
Extensor Hallucis Longus	4	2	4+	4+

## DISCUSSION

- Anterior communicating artery aneurysm ruptures frequently arising from the A1 segment usually present with visual changes, severe headaches, and intracranial hypertension.
- Anterior cerebral artery territory infarcts usually result in lower extremity weakness.
- Paraplegia is less commonly associated with an ACoA aneurysm rupture; however, current literature notes a phenomenon of Anterior Communicating Artery Paraparesis Syndrome with lower extremity weakness following aneurysm rupture or repair.
- Frontal lobe dysfunction and thromboembolic diseases are frequently associated with this syndrome and improvement of the paresis or paraplegia is noted, similar to this case with deep vein thromboses, encephalopathy, impulsivity, and hypo-aroused episodes.

## CONCLUSIONS

- Anterior Communicating Artery Paraparesis Syndrome is an uncommon presentation after a subarachnoid hemorrhage and has an unclear etiology for presenting like an ACA territory infarct.
- Our case presentation had similar manifestations to that seen in patients in literature with frontal lobe dysfunction, thromboembolic disease, and improvement of paraparesis.

## REFERENCES

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