Abdominal CT with dilated bladder and obstructing right renal artery.

Diagnosis and Treatment:
• MRI/MRA & MRV

RCVS is a rare, but increasingly recognized syndrome typically occurring in middle aged patients and affecting more women than men.

• The main clinical manifestations are severe, recurrent ‘thunderclap’ headaches, blood pressure surges, nausea, vomiting, blurry vision, and confusion (Table 2).

• MRV and MRA are the diagnostic studies of choice, but cerebral angiogram is required for diagnosis (Figure 3).

• Due to overlapping clinical and angiographic findings, CNS vasculitis needs to be excluded.

• The syndrome is idiopathic, but has been associated with numerous exogenous and endogenous vasoactive triggers.

• Our patient had no identifiable medication or endogenous triggers to explain her presentation (Table 3), thus we postulate that her syndrome may have been triggered by abrupt osmotic shifts from profound azotemia and hyponatremia.

• The pathophysiology of RCVS is not completely known, but is likely caused by a transient dysregulation of vascular tone, leading to multifocal arterial constriction and dilatation (Figure 4).

• The major complications are localized convection non-aneurysmal subarachnoid hemorrhage and ischemic stroke or intracerebral hemmorhage, which may leave permanent residual neurological deficits.

• RCVS may be under-recognized and frequently misdiagnosed because it can mimic common conditions such as migraines and ischemic stroke.

• Corticosteroids may worsen outcomes, and the role of calcium channel blockers and prostaacyclins are experimental. Permanent neurologic deficits occur in approximately 10% of patients.

• There are no proven therapies, thus interventions focus on removing vasoactive triggers.