

CEREBRAL VENOUS SINUS THROMBOSIS ASSOCIATED WITH CHRONIC HERBAL THERAPY

Cameron Williams D.O.¹

Mathew Mathew M.D.¹ Heemanth Neeli M.D.¹ Taras Tsyapa M.D.¹

¹Department of Internal Medicine Suburban Community Hospital, Norristown, PA

Background

Herbal supplementation is widely used in this current era of wellness, both as an alternative and as an adjunct to western medicine. With its growing popularity they have become more readily available, but they are not regulated by the FDA. Some of their benefits are widely agreed upon, but their side effects are not well studied or documented which can be a dangerous combination. This may confer false security of wellness benefits without risking adverse effects. We have prepared for your review a case of cerebral venous thrombosis in a patient on chronic herbal therapy.

Case Report

49 y.o. man with no prior medical history presented with confusion and focal neurologic deficits over the past day, and reports insomnia, headache, malaise for the last 1 week. Patient reports using herbal supplements and states recently increasing his consumption.

On presentation, patient was afebrile and confused.

Neurologic findings include, right arm and leg weakness, intermittent muscle cramps, ataxia, left lower homonymous quadransopia, and left sided dysmetria. He demonstrated poor attention, decreased comprehension, increased processing time. Imaging showed thrombus in the superior sagittal and right transverse dural sinus along with femoral and popliteal DVT in left lower extremity.

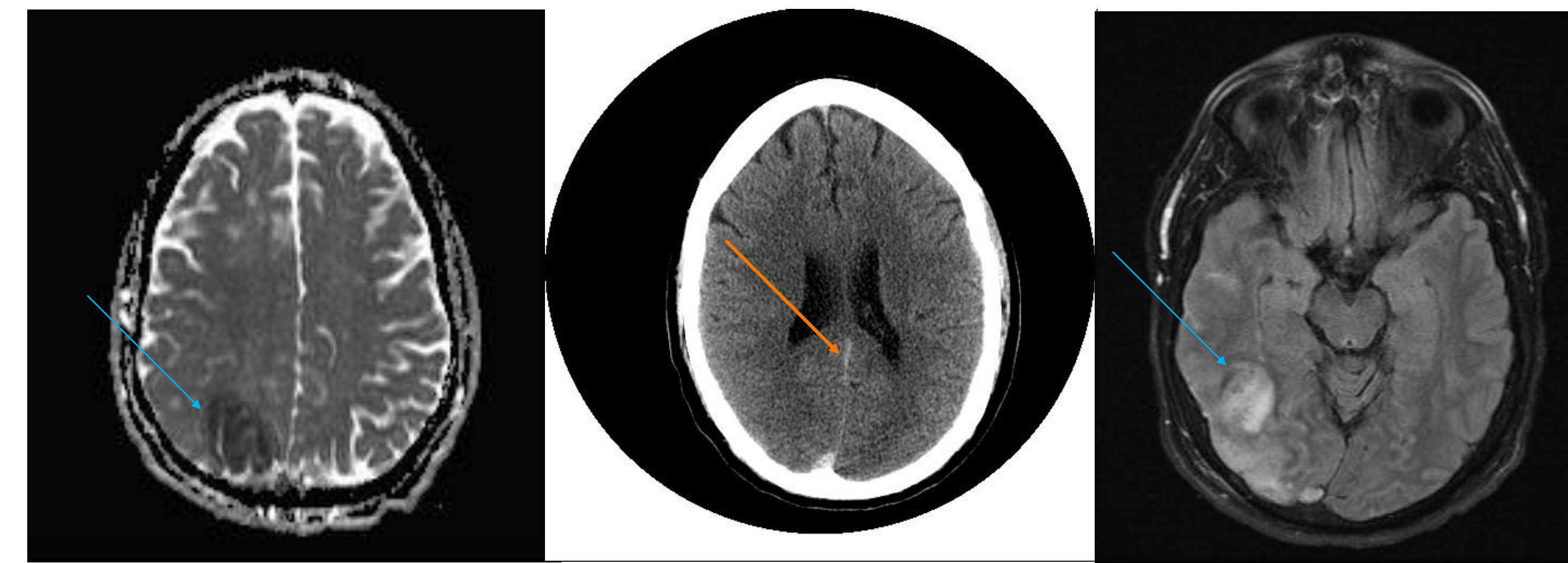
Patient was transferred to tertiary care center for Neurosurgery evaluation. He was not a candidate for an invasive intervention and was treated with systemic anticoagulation and discharged on Xarelto. Patients symptoms had completely resolved at time of follow up conversation and reported that hypercoagulable work up outpatient returned negative.

Vitals

- T 99.1, BP 120/64, HR 64, O2 sat 98% on Room Air

Labs/Imaging

- CBC: WBC 12.1x10 Hg 14.2 g/dL Hct 41.3% Platelets 199 10³/uL
- CMP: Na 139 mmol/L K3.8 mmol/L Cl 98 mmol/L CO2 17.0 mmol/L BUN 33.0 mg/dL Cr1.1mg/dL Mg 2.80mg/dL Bili 0.7mg/dL AST 19 U/L ALT 17 U/L Alk Phos 63U/L TSH 1.13 uIU/mL
- Brain MRI with gadolinium showed an acute infarct in right occipital region (left image) and high sagittal infarct (right image).
- CT head showed thrombosis in superior sagittal and the right transverse dural venous sinus (middle image).
- Venous dopplers showed left femoral and popliteal vein DVT.



References

1. Cerebral sinus venous thrombosis
Hernando Raphael Alvis-Miranda, Sandra Milena Castellar-Leones, Gabriel Alcalá-Cerra and Luis Rafael Moscote-Salazar
Journal of Neuroscience in Rural Practice Oct-Dec 2013 pg 427-438 PMID: 24347950
2. Impact of Chinese Herbal Medicine on American Society and Health Care System: perspective and concern
Winston I. Lu and Dominic P. Lu
Evidence-Based Complementary and Alternative Medicine Vol 2014, Article ID 251891

Discussion

- Cerebral venous thrombosis (CVT) is an uncommon entity with variable presentation. Headache is the most common symptom, while stroke is the most dangerous. Some of the major risk factors for CVT in adults are prothrombotic conditions, medications (oral contraceptives, androgens), pregnancy, malignancy, infection and mechanical precipitants like lumbar puncture, head injury, jugular catheter occlusion. Herbal supplements are commonly used for an array of ailments. Although herbal supplements are popular in this era of wellness, they are not well-studied and there is very little evidence to support their therapeutic use. However, the many side effects of these medications are documented. While no direct link between herbal supplement use and cerebral venous thrombosis has been established, the wide array of side effects from these herbs are often contributing factors that increase the risk for acute thrombosis including a link to Budd-Chiari syndrome associated with ingesting pyrrolizidine, a plant alkaloid, used to make “bush tea.” Given it's prevalence herbal supplementation and their side effects are an area of study that warrants more investigation. The etiology of our patient's cerebral venous thrombosis and acute DVT is related to side effects of the combination of herbal remedies. None of the reported herbal substances are known to cause thrombosis.

Conclusion

- With its growing popularity in western society, herbal supplementation and their side effects are an area of study that warrants more investigation. While many benefits are described in literature there is insufficient evidence on the vast array of side effects that these can also cause. Benefits along with the possible complications of its use are necessary to provide in order for consumers to have safe and knowledgeable ingestion.