

Renal infarction is a rare condition which happens due to embolic/thrombotic occlusion of the renal artery or vasospasm of the renal artery. Bilateral renal infarcts present with acute kidney injury and oliguria/anuria. Unilateral renal infarct often goes unnoticed as it presents with flank pain and nausea with no abnormalities in urinalysis or creatinine. Triptans are well tolerated medications with known side effects of arteriolar vasospasm and end-organ ischemia.

### Case report :

We present a case of 58 year old female with sudden onset right flank pain since 3-4 hrs associated with few episodes of vomiting. She had history of recurrent migraines since 11years and was on zolmitriptan since 10 years was using it three times every month however over last ten days she used four times though was advised to use maximum four times per month.

Initial investigations, including complete blood counts, basic metabolic panel, liver function tests, lipase and urinalysis, were all within normal limits. CT scan of abdomen with contrast showed Mid and lower third of right kidney and posterior aspect of inferior third of left kidney reduced contrast enhancement (Fig. 1).

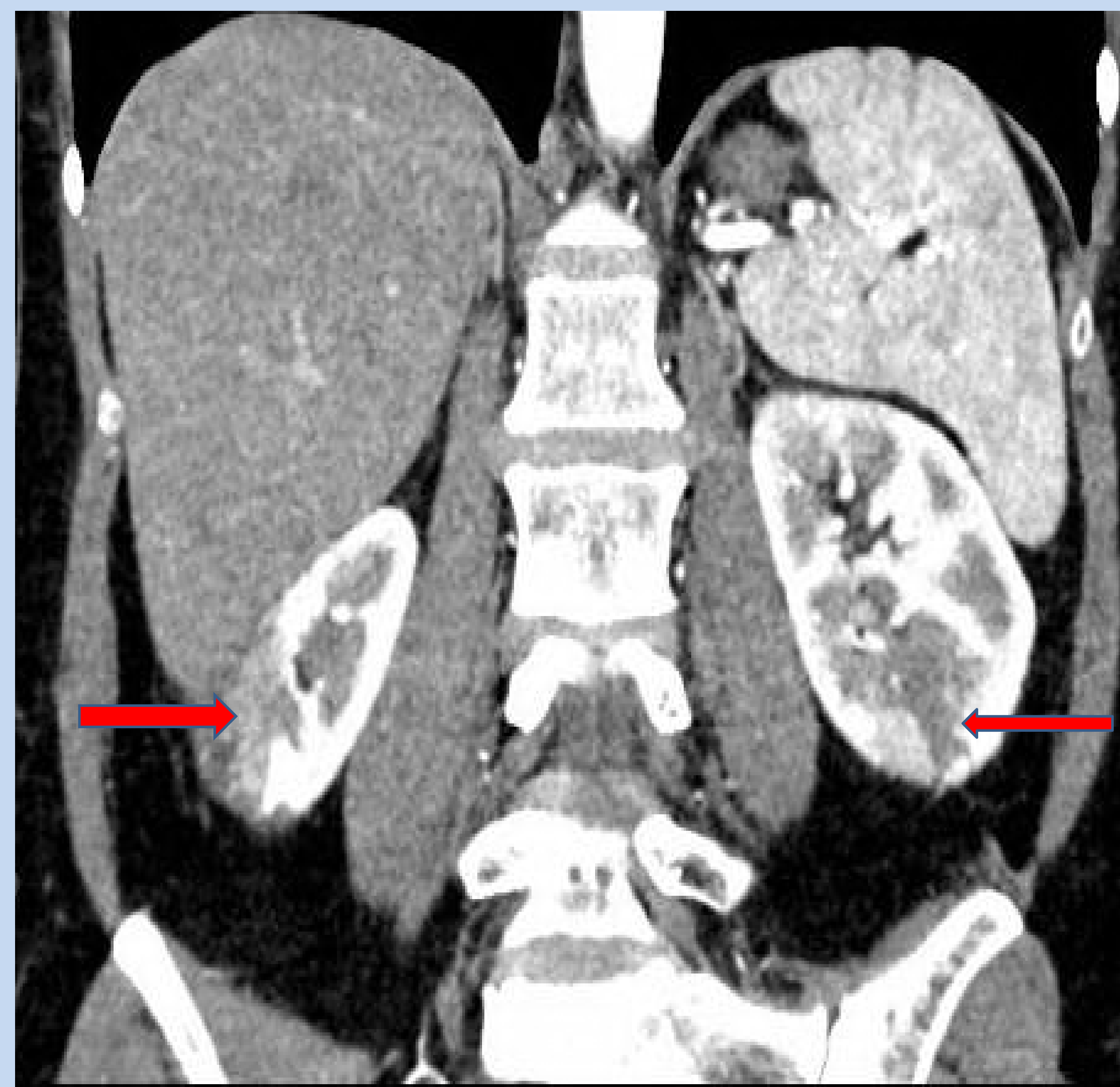


Fig 1 CT scan with contrast( Abdomen and Pelvis) showing mid and lower third of Right kidney and inferior third of left kidney infarcts shown by red arrows

Coagulation profile was within normal limits. D-DIMER 2.40. LDH was found to be elevated at 1282 U/L and Total Bilirubin 22 umol/l. Screening tests for hypercoagulable state and connective tissue disorders \_ factor V Leiden, homocysteine level, lupus anticoagulant, ANA, ANCA, and rheumatoid factor were all negative. Proteins C and S were within normal limits. Hepatitis, HIV and HTLV serology was negative. Molecular genetics- no evidence of V617F missense was found. EKG and cardiac monitoring for 72 h revealed normal sinus rhythm,

and 2D echocardiogram did not show any intracardiac thrombus or valvular vegetations. Renal Doppler ultrasound ruled out renal artery stenosis. After extensive workup, it was deemed that her renal infarcts were due to zolmitriptan. She was managed conservatively and improved significantly during the course of her hospitalization. She was sent home in a stable condition with recommendations to stop zolmitriptan.

### Discussion:

Triptans are 5-hydroxytryptamine receptor 1B/1D (5HT-1B/1D) receptor agonists. Through these receptors, triptans cause vasoconstriction of the cerebral vessels thus reversing the abnormal vasodilation and relieving migraine headache. Triptans, due to their inherent property of vasoconstriction, can result in myocardial infarction, cerebrovascular ischemia, mesenteric ischemia, spinal cord ischemia, or splenic infarct due to arterial spasm. A review of literature revealed three cases reported of renal infarction due to triptans. We believe the renal infarction in our patient was caused by Zolmitriptan. The close temporal relationship between the use of the medication and the occurrence of symptoms support this hypothesis. It is emphasized to remember end-organ ischemia as a side effect of triptans, which could add considerable morbidity.

### Conclusion :

The aim of this report is to stress the potential adverse effects of triptans. Because triptans are commonly used medications, it is important to remember the vasoconstrictive properties and be vigilant about prescribing to patients with history of hypercoagulable/atherothrombotic diseases. We emphasize renal infarction as a rare but serious side effect with triptans. As more cases are recognized and reported, it will be possible to establish a dose response relationship.