A Rare Post-Partum Diagnosis of Cerebrovascular Fibromuscular Dysplasia

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Introduction

Fibromuscular dysplasia (FMD) is a rare idiopathic disease, primarily affecting women, that is characterised by abnormal cellular proliferation and distorted architecture of the arterial wall, most commonly involving the carotid and renal arteries.[1] There are limited case reports in the literature about cerebrovascular FMD presenting in the postpartum period.[2, 3, 4]

Case Report

One week post uncomplicated spontaneous vaginal birth at term, a 31 year-old G2P2 female presented with a sudden-onset unilateral headache and blurred vision. She had a long history of similar headaches managed by her GP but otherwise had no significant past medical history, a normal booking blood pressure and BMI, and was a non-smoker. Of note, the birth weight of her baby was 2830g (8th centile for gestation).

At presentation she was hypertensive (blood pressure 170/110mmHg) and had proteinuria with a spot urine protein: creatinine ratio of 130mg/mmol. A CT venogram brain. Bloods including FBE, UEC, LFT, ANA, ds-DNA and C3/C4 were normal.

Nifedipine IR and labetalol were initially required to control her blood pressure; enalapril was introduced later. Her headache worsened over the following 24 hours and began to radiate to her left neck. A CT angiogram head/neck demonstrated possible left internal carotid artery dissection and diffuse arterial irregularity with beading of the internal carotid arteries, vertebral and cerebral arteries, suggestive of FMD. There was no evidence of renal artery involvement. She was commenced on aspirin. Her symptoms resolved once her blood pressure stabilised.

The patient was followed up in neurology and renal obstetric medicine outpatient clinic. The patient remained asymptomatic after discharge. Although she required anti-hypertensives for six weeks post-partum, at the time of eventual ambulatory blood pressure monitoring she was normotensive and her proteinuria had resolved. The impression was that her post-partum hypertension was secondary to pre-eclampsia. The recommendation is for life-long low dose aspirin. The patient will also be seen for further obstetric-based pre-conception counselling.

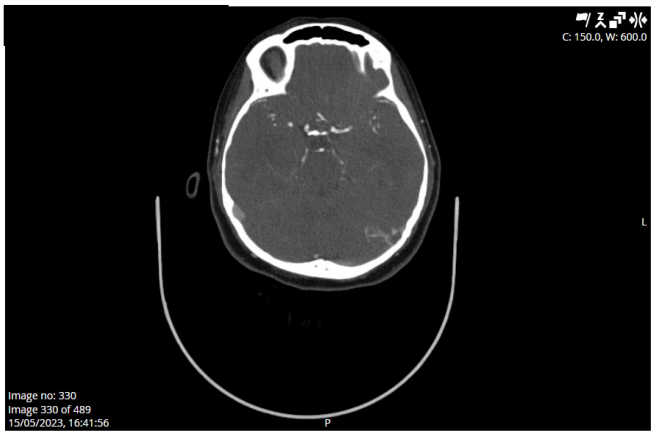

Image 1: Focal high-grade stenosis of the left PCA P1/P2 segment without occlusion

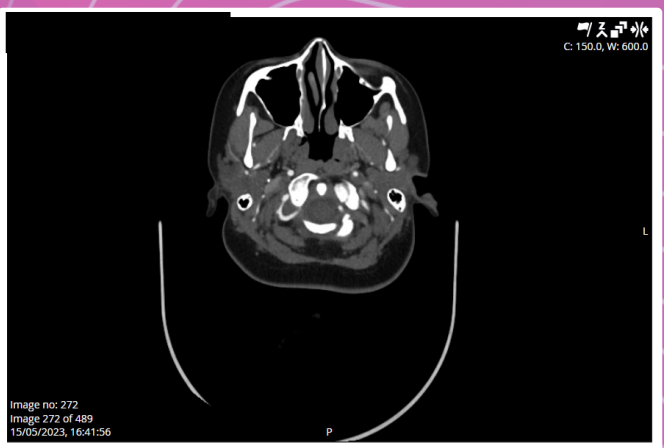

Image 2: Aneurysm of the right vertebral artery at the level of C1

Conclusion

This case highlights the importance of considering further investigations to exclude less common causes of atypical or persistent headaches in the post-partum period. Whilst FMD can masquerade as pre-eclampsia, in this case it proved to be a co-morbid condition, with uncontrolled hypertension causing vascular dissection in the setting of patient pre-disposition. Patients with FMD who decide to become pregnant need a comprehensive, multi-disciplinary care approach and consideration should be given to mode of delivery to reduce risk of aneurysm rupture.[1]

References

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