Non-Haemorrhagic Adrenal infarction during Pregnancy (NHAI)

LIVERPOOL HOSPITAL Established 1813

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Transformation: Making Waves

Introduction

Non-Haemorrhagic adrenal infarction (NHAI) is a rare and potentially serious cause of acute abdominal pain during pregnancy. Only a handful of case reports exist, predominantly in hypercoagulable states such as antiphospholipid syndrome or pregnancy, and may lead to adrenal insufficiency.

Clinical Case

A 26-year-old G1P0 at 34 weeks' gestation presented with sudden RUQ pain radiating to her back. Medical history was significant only for well controlled gestational diabetes.

On examination she was hemodynamically stable with RUQ tenderness without signs of peritonism. Significant pain refractive to analgesia continued despite normal pathology and normal RUQ and obstetric ultrasounds.

Consequently, an abdominal CT was performed which demonstrated a right diffusely swollen adrenal gland without intralesional hypodensity, compatible with a NHAI. The obstetric medicine and haematology physicians consulted.

An equivocal morning serum cortisol level and normal thrombophilia screen was noted. Therapeutic Clexane was commenced and she was discharged on day four with improving pain.

Induction of labour occurred at a 38+2 due to new borderline oligohydramnios. Delivery was expedited with a vacuum extraction due to foetal bradycardia and a baby boy was born in good condition.

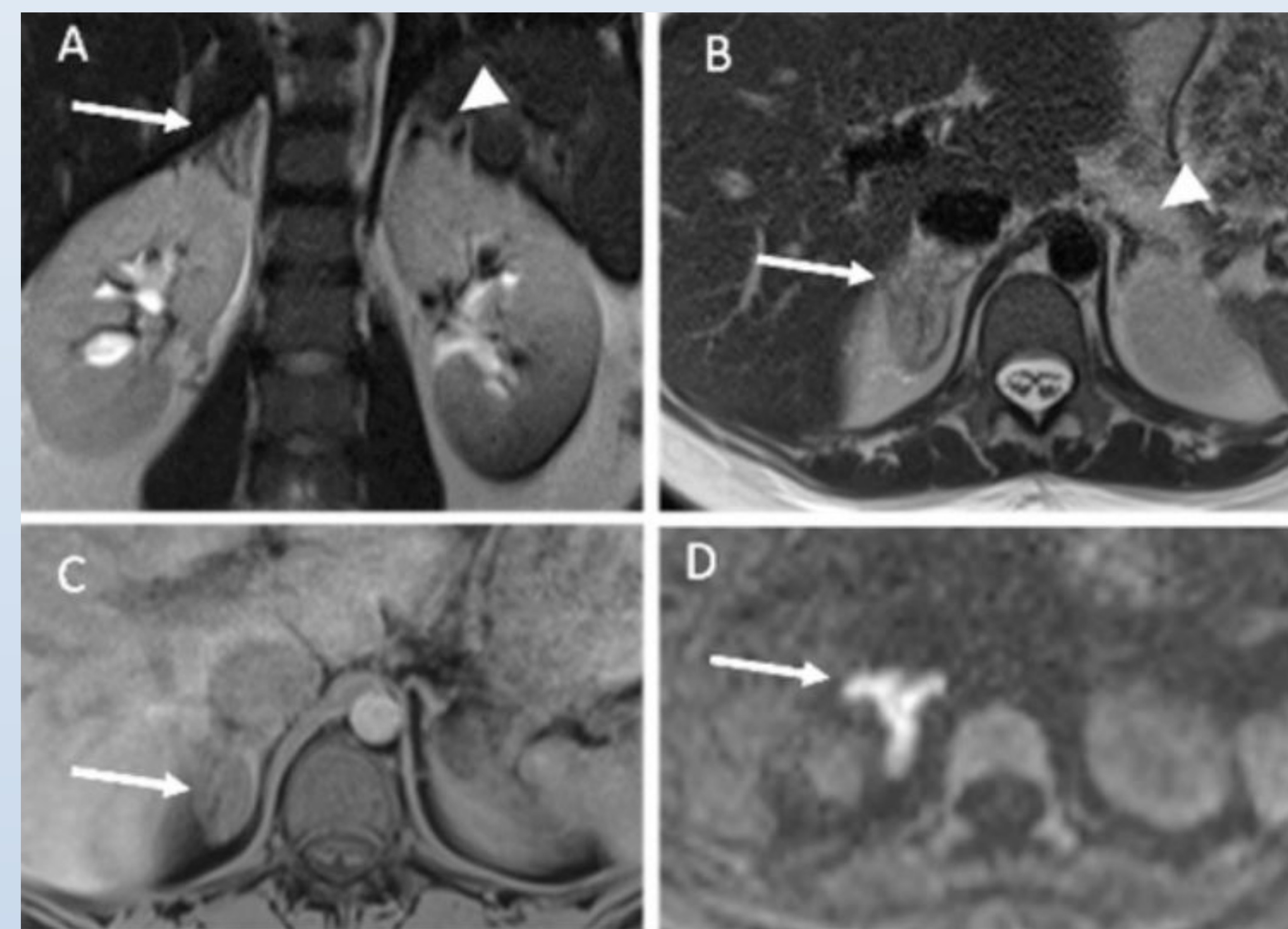

Figure 1. MRI findings:. (**A**,**B**) T2-weighted MR imaging, coronal (**A**) and axial (**B**) planes showing oedema of the right adrenal gland (arrow) and adjacent fat. No abnormality of the contralateral gland (arrowhead). (**C**) Unenhanced axial T1-weighted imaging showing no hyperintensity of the adrenal gland (arrow). (**D**) Diffusion-weighted MR imaging (b800) showing restricted diffusion of the adrenal gland (arrow).

Postpartum she was transitioned to warfarin with Clexane bridging and was discharged on day four with follow-up in the obstetric and haematology outpatient clinic.

Conclusion

Given the rare and variable presentation of NHAI it remains a poorly understood and likely under-reported pregnancy complication. This case highlights the necessity of considering NHAI as a differential diagnosis in unremitting abdominal pain in pregnancy.

References

1. Baheti, A.D.; Nicola, R.; Bennett, G.L.; Bordia, R.; Moshiri, M.; Katz, D.S.; Bhargava, P. Magnetic Resonance Imaging of Abdominal and Pelvic Pain in the Pregnant Patient. *Magn. Reson. Imaging Clin. North Am.* **2016**, *24*, 403–417.

2. Glomski, S.A.; Guenette, J.; Landman, W.; Tatli, S. Acute Nonhemorrhagic Adrenal Infarction in Pregnancy: 10-Year MRI Incidence and Patient Outcomes at a Single Institution. *Am. J. Roentgenol.* **2018**, *210*, 785–791.

3.Chasseloup, F.; Bourcigaux, N.; Christin-Maitre, S. Unilateral non-haemorrhagic adrenal infarction as a cause of abdominal pain during pregnancy. *Gynecol. Endocrinol. Off. J. Int. Soc. Gynecol. Endocrinol.* **2019**.