ANTI-LEUCINE-RICH GLIOMA INACTIVATED 1 (LGI1) ENCEPHALITIS ASSOCIATED WITH HIGH GRADE PAPILLARY UROTHELIAL CARCINOMA

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Introduction LGI1 encephalitis is a rare form of limbic encephalitis, that was first recognised as a primary autoimmune phenomenon, and subsequently described in association with a limited number of malignancies.1 We report a novel case of LGI-1 encephalitis occurring concurrent to a high-grade papillary urothelial carcinoma.

Case Presentation A previously well 72-year-old male presented to a rural hospital with a first episode generalised tonic-clonic seizure, confusion and progressive behavioural change. He was diagnosed with LGI-1 encephalitis, with positive CSF antibodies, and mesial temporal T2 hyperintensity on MRI brain. There was no response to first line treatment with steroids, intravenous immunoglobulin, and mycophenolate. Malignancy screening revealed a lesion within the upper pole of the left kidney, favoured to represent a transitional cell carcinoma. Biopsy demonstrated a low grade papillary urothelial carcinoma. The patient’s encephalopathy continued to worsen over a period of months, despite ongoing immunosuppression. He underwent a left nephroureterectomy, and histology demonstrated a high-grade papillary urothelial carcinoma. Subsequent to this, there was improvement in cognition and behaviour. Psychotropic and immunosuppressive medications were slowly weaned. At 9-month follow-up, the patient has returned close to baseline function, and has been clinically stable off all immunosuppressive treatment.

Conclusions LGI-1 encephalitis has previously been described in association with thymoma, lymphoma, teratoma, and more recently with lung and prostate cancer.1,2 We believe our case is the first report of association between LGI-1 encephalitis and high grade papillary urothelial carcinoma.

REFERENCES

CONTRAST-INDUCED ENCEPHALOPATHY AFTER CARBON DIOXIDE ANGIOGRAPHY IN THE UPPER EXTREMIT Y AND IODINATED CONTRAST – A CASE REPORT

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Objective Carbon dioxide (CO2) is used as an alternative contrast agent in angiography for patients with iodinated contrast allergy or impaired renal function. CO2 angiography is contraindicated in cerebral circulation based on demonstrated neurotoxicity in animals.1,2 We present a case of reversible neurological complications post CO2 angiography and iodinated contrast.

Methods and Results A 65-year-old man presented with an ischaemic finger from steal syndrome post-arteriovenous fistula ligation, on a background of end-stage renal disease and type 2 diabetes. He underwent CO2 angiography for evaluation of right upper limb circulation. Immediately after the first CO2 injection into the right brachial artery, he became unresponsive and spontaneously recovered after 1-minute. Due to poor distal opacification with CO2, 15ml of iodinated contrast was administered. At 3-hour post-procedure, he developed left facial droop, left hemiparesis and left visual neglect. CT brain, angiogram and perfusion study at 5-hour post-procedure showed no acute changes. Overnight, he worsened to dense left hemiplegia. Non-contrast CT brain at 11-hour post-procedure showed oedema and hyperdensity in the right hemisphere. He had a seizure on day 1 post-procedure. MRI brain performed 24-hour post-procedure showed dramatic resolution of right hemispheric cerebral oedema with no diffusion restriction. All neurological deficits completely resolved 7-day post-procedure.

The CO2 which refluxed into the cerebral circulation from the brachial artery, caused the breakdown of blood-brain barrier, allowing penetration of iodinated contrast and subsequent right hemispheric cerebral oedema.

Conclusions This case highlights the risk of air embolism and neurotoxicity of CO2 angiography and the rare occurrence of contrast-induced encephalopathy.

REFERENCES