

Iatrogenic Cerebral Gas Embolism Successfully Treated With Hyperbaric Oxygen Therapy

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INTRODUCTION/BACKGROUND

- HBO₂ to treat gas embolism remains the definitive treatment for gas embolism. Indications for treatment include neurological manifestations or cardiovascular instability.⁽¹⁾
- Literature reports show decreased time between the insult and HBO₂ is associated with better outcome.⁽²⁾

CASE STUDY

- A 35 year-old female with anorexia/bulimia presented to the emergency department for rehydration therapy with NS through her central venous catheter. Other co-morbidities include: ESRD, hypokalemia, dehydration and OCD/depression.
- During fluid therapy administered with a pressure bag, the patient became unresponsive, requiring full resuscitation. Left sided neurological abnormalities developed.
- Initial head CT demonstrated gas in multiple cortical veins on the right over the frontal and parietal lobes and within cervicocerebral venous structures.

REFERENCES

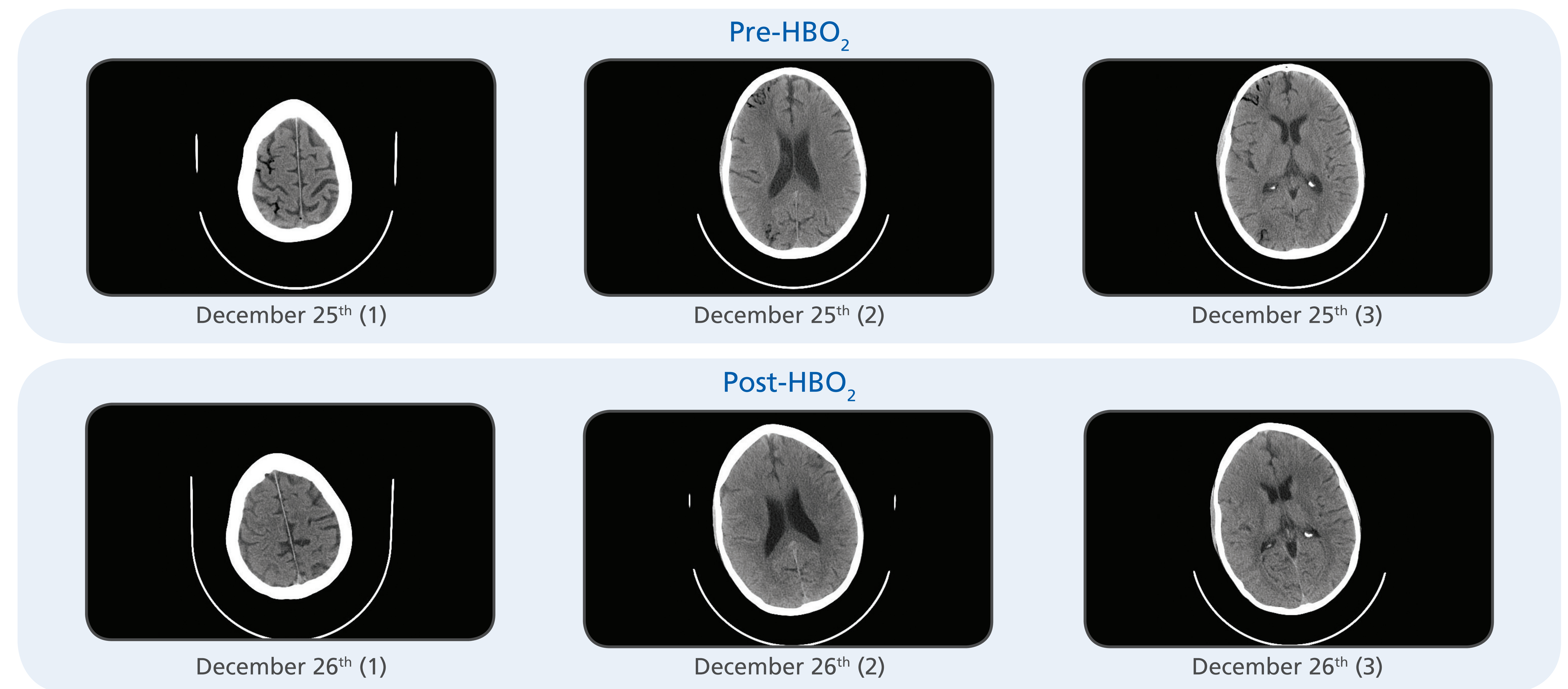
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TREATMENT

- Pre-treatment examination showed: ability to answer simple questions but unable to follow commands; poor eye tracking and left side neglect/hemiparesis with posturing.
- Standard US Navy Treatment Table 6 was administered.⁽³⁾
- Second (and final) treatment was at 2.4 ATA for 110 minutes.
- Third treatment was deferred due to patient refusal and clinical improvement.

RESULTS

- Repeat CT at 24 hours showed clearance of previously seen intracranial gas.
- Patient had dramatic improvement in symptoms. After treatment she recovered spontaneous movement of her extremities and speech, and mental status improvement.
- At discharge she had complete resolution with no evidence of residual effects of the event.



SUMMARY/CONCLUSION

Iatrogenic cerebral gas emboli can have devastating effects if not recognized and treated immediately. Fortunately for this patient emergently administered HBO₂ resulted in complete resolution of symptoms.