Piperacillin/tazobactam-induced myoclonic jerks in a man with chronic renal failure

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DESCRIPTION

A 57-year-old man had microscopic polyangiitis with renal impairment. He was admitted for bronchiectasis and haemoptysis. PCR of *Legionella pneumophila* DNA was positive. The patient was given Piperacillin/tazobactam 2.25 g every 8 h. He developed jerky movement of limbs after the second dose of the drug. Physical examination showed random myoclonic jerks of limbs (video 1) and tongue (video 2). The patient was alert and oriented. His limb power was full. Serum creatinine was 676 $\mu\text{mol/L}$ (normal range 64–111), urea

32 mmol/L (normal range 3–9.2). Serum potassium, calcium and magnesium were normal. CT of the brain and EEG were unremarkable. Piperacillin/tazobactam was stopped and the myoclonus subsided.

Piperacillin/tazobactam-induced myoclonic jerks are rare.¹ Piperacillin increases the risk of developing seizure activity by reducing inhibitory hyperpolarising chloride currents across γ -aminobutyric acid type A receptor-gated channels within the brain and spinal cord.¹ Haemodialysis is useful in treatment of severe piperacillin-induced neurotoxicity.²

Video 1 Myoclonic jerks of limbs.

Video 2 Myoclonus of tongue.

Learning points

- ▶ Piperacillin/tazobactam-induced myoclonic jerks are rare.
- ▶ Piperacillin increases the risk of developing seizure activity by reducing inhibitory hyperpolarising chloride currents across γ -aminobutyric acid type A receptor-gated channels within the brain and spinal cord.
- ▶ Haemodialysis is useful in treatment of severe piperacillin-induced neurotoxicity.

Competing interests None declared.

Patient consent Obtained.

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- 2 Lin CS, Cheng CJ, Chou CH, *et al.* Piperacillin/tazobactam-induced seizure rapidly reversed by high flux hemodialysis in a patient on peritoneal dialysis. *Am J Med Sci* 2007;333:181–4.

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