CASE OF THE MONTH

A 60 year old man with a history of transient ischaemic attacks (TIA) presented to a rural hospital with a 5 day history of headache, fevers and new onset left-sided weakness. His weakness subsequently resolved and he was discharged home with a presumed TIA. Two days later he represented with increasing left-sided weakness, headache, fevers, dysphagia and a weak cough. On examination he was also noted to have diplopia, decreased left facial sensation and a left cranial nerve VII palsy. A CT brain was unremarkable. That night he developed acute respiratory failure and was intubated for transfer to St Vincent's Hospital. An MRI brain showed multiple ring enhancing lesions within the brain stem and upper cervical cord (see Fig below). The CSF revealed a leucocyte count of 144 x 10^6/L (92% lymphocytes) but no organisms were isolated (broad spectrum antibiotic therapy already commenced). Additional history revealed that 1 month prior to his initial presentation, the patient had been drinking unpasteurised milk from a vat on the family farm. The provisional diagnosis was of Listeria rhomboencephalitis with differential diagnosis of tuberculosis, toxoplasmosis, cryptococcus, nocardia and vasculitis. Despite antimicrobial and supportive therapy, he continued to deteriorate neurologically and developed multi organ failure. He died on day 19 of his illness. PCR for Listeria monocytogenes was positive on post-mortem tissue from a brainstem abscess confirming the diagnosis of listeria rhomboencephalitis.

Listeria monocytogenes causes 22% of all bacterial meningitis in people over the age of 60. Transmission is typically by consumption of contaminated food including raw milk, cheese, and poultry. The major risk factor is immunosuppression, however 36% of cases have no underlying disease. Listeria rhomboencephalitis typically follows a biphasic course, presenting initially with headache, fever and vomiting followed in several days with CN palsies, cerebellar signs, and hemiparesis, which can resemble stroke. CT Brain is usually normal. The mortality rate is approximately 50%, but is significantly improved with early treatment.

Fig: MRI brain showing some of the multiple ring enhancing lesions.

Golden rules in Infectious Diseases
Never underestimate a staphylococcal bacteraemia: look into the heart and at the bone.

Antibiotic of the month

Fosfomycin (intravenous)

Fosfomycin is a last-line IV antibiotic that is reserved for treatment of some serious Gram-negative infections. It is not registered in Australia and is imported via the SAS program. Use of fosfomycin cannot be initiated or continued without approval from the Infectious Diseases consult.

Usual dose: 8 gram IV 8-hourly

Clinical use: IV fosfomycin is a bactericidal antibiotic and may be effective for some otherwise highly resistant pathogens such as KPC-Klebsiella pneumoniae. Use should be guided by susceptibility testing of isolates, as fosfomycin-resistant KPC isolates have been isolated in Australia.

For information on oral Fosfomycin, see previous issue No. 15 (Mar-Apr 2014) (link below)

EBOLA Virus (EV)

• There are 5 species of EV that have been identified: Zaire, Bundibugyo, Sudan, Reston and Tai Forest. The first 3, have been associated with large outbreaks in Africa. The virus causing the 2014 west African outbreak belongs to the Zaire species.
• Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe often fatal illness in humans.
• The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.
• The average EVD case fatality rate is around 50%. Case fatality rates have varied from 25 to 90% in past outbreaks.
• The first EVD outbreaks occurred in remote villages in Central Africa, near tropical rainforests, but the most recent outbreak in west Africa has involved major urban as well as rural areas.
• Community engagement is key to successfully controlling outbreaks. Good outbreak control relies on applying a package of interventions, namely case management, surveillance and contact tracing, a good laboratory service, safe burials and social mobilisation.
• Early supportive care with rehydration and symptomatic treatment improves survival. There is as yet no licensed treatment proven to neutralise the virus but a range of blood, immunological and drug therapies are under development.
• There are currently no licensed Ebola vaccines but 2 potential candidates are undergoing evaluation.

Previous issues available at: http://path.svhm.org.au/services/Pages/BugBusters.aspx