

Protocol for immunisation of children with Dravet syndrome or other vaccine-proximate seizures

High risk children should be seen in both the Neurology and RCH Immunisation clinics to confirm the vaccine plan, prior to arranging admission.

The highest risk time for VPS following inactivated vaccines is in the first 48 hours after vaccination. Therefore, 'high-risk' children and will be admitted to hospital prior to administration of inactivated vaccines, and remain an inpatient for at least 48 hours after vaccination.

Admission

- Elective admission to RCH Cockatoo ward under the Neurology team
- Aim to avoid admission on a Friday
- Continue usual antiepileptic medication (if prescribed)
- Prescribe PRN **intranasal midazolam** (0.3 mg/kg, rounded up to the nearest 0.5 mg, maximum dose 10 mg)
- Intravenous access is **not** routinely required

Prophylactic medications

Medications should be commenced one hour prior to immunisation, and continue for 48 hours (longer if the child is febrile).

- Medications should be given regularly (not PRN)
- **Paracetamol** – orally, 20 mg/kg as a first dose, followed by 15 mg/kg QID
- **Clonazepam** – orally, 0.01 mg/kg as a first dose, followed by 0.01 mg/kg every 8 hours

Emergency management of seizures

- **Intranasal midazolam** should be given without delay at the onset of a seizure
- Call a MET (777)
- Status epilepticus should be managed according to hospital/APLS guidelines unless the patient has an individualised plan.
- If a second midazolam dose is required it can be given IM if there is no IV access (0.15 mg/kg, maximum 10 mg)

Discharge

Discharge can be considered after 48 hours if the child has been afebrile for 12 hours.

References

1. Farrington P, Pugh S, Colville A, et al. A new method for active surveillance of adverse events from diphtheria/tetanus/pertussis and measles/ mumps/ rubella vaccines. *Lancet*. 1995; 345 (8949): 567-56
2. Barlow et al. The risk of seizures after receipt of whole-cell pertussis or measles, mumps and rubella vaccine. *NEJM*. 2001; 345 (9)
3. Griffin MR, Ray WA. Risk of seizures after measles-mumps-rubella immunization. *Pediatrics*. 1991; 88 (5): 881-5
4. Bakken IJ, Aaberg KM, et al. Febrile seizures after 2009 influenza A (H1N1) vaccination and infection: a nationwide registry-based study. *BMC Infect Dis*. 2015; 15: 50
5. Huang WT, Gargiullo PM, et al. Lack of association between acellular pertussis vaccine and seizures in early childhood. *Pediatrics*. 2010; 126 (2) 263-9
6. Klein NP, Fireman B, et al. Measles-mumps-rubella-varicella combination vaccine and the risk of febrile seizures. *Pediatrics*. 2010; 126 (1): e1-8.
7. Verbeek NE, van der Maas NA, et al. Prevalence of SCN1A-related Dravet Syndrome among children reported with seizures following vaccination: A population based ten-year cohort study. *PLOS One*. 2013; 8 (6): e65758
8. McIntosh AM, McMahon J, et al. Effects of vaccination on onset and outcome of Dravet syndrome: a retrospective study. *Lancet Neurology*. 2010; 9: 592-9
9. Chiron C, Marchand MC, et al. Stiripentol in severe myoclonic epilepsy in infancy: a randomised placebo-controlled syndrome-dedicated trial. *The Lancet*. 2000; 356: 1638-1642

Revised: 8 October 2019

Guideline written in collaboration between the RCH Neurology Department and Immunisation team
For Immunisation queries contact the RCH Immunisation hotline [1300 882 924- open business hours]