

Pertussis outbreak in a neonatal unit at tertiary hospital: Sharing experience



Arfa Adura Arshad¹, Noridah Nordin¹, Norani Shafii¹, Izzul Ikhwan Che Arifin², Maizun Mohd Zain², Shazreen @ Fatimah Shaari³

1. Infection Control Unit, Hospital Raja Perempuan Zainab II (HRPZ II), Kelantan
2. Public Health Unit, HRPZ II
3. Department of Paediatric, HRPZ II, Kelantan

INTRODUCTION

Bordetella pertussis, the aetiological agent of whooping cough, is transmitted by droplet spread and is highly infectious. Here we describe an outbreak of pertussis in a neonatal unit with outbreak investigations and containment.

METHODS

On 26th September 2023 pertussis outbreak was declared after a nasopharyngeal sample of a 60-day old baby warded since birth confirmed *Bordetella Pertussis* by PCR (Polymerase Chain Reaction). Rapid assessment of the extent of outbreak was done clinically by symptoms review and sending upper respiratory sample for *Bordetella pertussis* PCR. The outbreak ended on 21st October 2023. Remedial measures and control interventions initiated and throughout the period.

RESULTS

The neonatal unit (NICU) has 30 beds with adjacent interconnected special care unit (SCN) with 80 beds. There are a total of 109 nurses in charge of both wards.

Total of 19 staffs were symptomatic upon contacts screening and were given Azithromycin immediately. Upper respiratory samples of close contacts and symptomatic staffs reveals another 4 positive *Bordetella Pertussis* i.e. 3 neonates who were warded since birth (12-day, 90-day, 50 day old and a 50-year-old nurse).

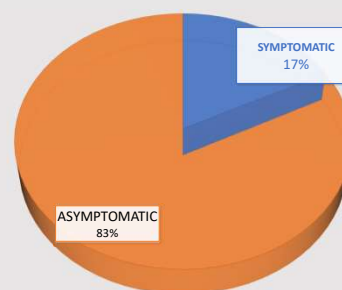


Chart 1. Percentage of NICU and SCN staff screening for *Bordetella pertussis* PCR September – October 2023

DISCUSSION

- Vaccination Tdap were encouraged.
- Mass chemoprophylaxis was given to all staffs in NICU and SCN including doctors.
- Enhanced infection control measures that include hand hygiene, cough etiquette and wearing face mask were emphasized.
- Education about pertussis were done through talks and poster to raise awareness and promote compliance to control measures.
- Health declaration form to the visitors, surveillance of new cases was implemented. The source of this outbreak was not able to be identified but likely due to adult transmission to the babies, either from health care workers or visitors.

CONCLUSIONS

Sharing our experience in managing pertussis outbreak in neonatal unit is very important for enhancing preparedness and response efforts. It can also facilitate the exchange of best practices from other facilities.



Figure 1. Babies in SCN (Ward 2)



Figure 2. Education about pertussis



Figure 3. Education infection control measures

Contact

Arfa Adura Arshad
Unit Kawalan Infeksi
Email: arfaadura@gmail.com
Phone: 09745 2000 ext 2428

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