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WHOOPIING COUGH IN CHILDREN: EXPERIENCE OF HOSPITAL SÃO JOÃO (2003- 2009)

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Background: *Bordetella pertussis* (BP) is a worldwide public health problem, which affects 20 to 40 million people each year.

Objective: To describe the clinical and epidemiological pattern of BP infection among children.

Methods: We analyzed the clinical files of children with a PCR-confirmed BP in nasopharyngeal aspiration who were hospitalized in a tertiary care hospital between January 2003 and December 2009.

Results: There were 36 admissions for whooping cough; 75% of them were infants younger than 2 month-old and 69% had never been vaccinated. The average length of hospitalization was 12.7 days. There was no difference between winter and summer months. The prevalence was higher in 2006 (28% of all cases). Dual infection of BP with other agents occurred in 31% (7 cases of respiratory syncytial virus and 1 case each of metapneumovirus, parainfluenza 3 and adenovirus).

Cough was the most frequent symptom (89%; median duration of 12 days). Leukocytosis occurred in 33% and lymphocytosis in 64%.

All patients were treated with macrolides (74% erythromycin). Supplemental oxygen was used in 47% (median 8.5 days); bronchodilators in 64%, systemic corticosteroids in 33% and respiratory exercise in 8%.

The major complications were apneas (25%) and pneumonia (19%). There were 7 (19%) severe cases that required mechanical ventilation, all in children younger than 3 month-old. One death occurred in a 1 month-old patient.

Conclusion: Despite widespread vaccination, the incidence of BP has been rising. New vaccination

strategies should be evaluated to protect infants as early in life as possible.

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COMPARISON OF ANTIBIOTIC DOSING RECOMMENDATIONS FOR NEONATES FROM COMMON REFERENCES

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Background and aims: Computer physician order entry (CPOE) and clinical decision support systems contribute to the reduction of medication errors. Although evidence-based dosing should be included in the systems, data are not always available and dosing is based on expert opinion, derived from guidelines and textbooks. To define a gold standard for neonatal antibiotic dosages, we compared recommendations provided by international reference sources.

Methods: Neonatal daily doses for the 12 most frequently used antibiotics were identified from 7 well-respected references (Nelson's, British National Formulary for Children, Pediatric Dosage Handbook, Redbook, etc). The average daily dosage (ADD) was calculated, as well as the relative deviation $Rd = (DD_{max} - DD_{min}) / ADD * 100\%$.

Results: The sources provided recommendations for neonatal sepsis (n = 7), meningitis (n = 7), and necrotizing enterocolitis (n = 1). The dosing recommendations of amoxicillin, ampicillin, amoxicillin-clavulanic acid, flucloxacillin, meropenem, gentamicin, vancomycin, erythromycin, cefotaxime and rifampicin did not show clinically relevant differences ($Rd < 50\%$). Dosing recommendations for benzylpenicillin and ceftazidim showed major variation between sources ($Rd = 75\%$ and $Rd = 68\%$, respectively).

Conclusions: Gold standard, expert opinion antibiotic dosage recommendations for neonates can be derived from important textbooks and guidelines for most, but not all antibiotics. To obtain full benefit of CPOE and clinical decision