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# ANTIBIOTIC PRESCRIBING FOR CHILDREN IN A PEDIATRIC EMERGENCY DEPARTMENT

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**Objectives and aims**: The injudicious use of antibiotics is closely related to the development of antibiotic-resistant bacteria. The aim of this study was to evaluate the antibiotic prescribing habits in a pediatric emergency department (PED).

**Methods:** We retrospectively examined the records of children up to 14 years old, visiting the pediatric emergency department of a public teaching hospital (Kalamata, Greece) from January to December 2009, which were discharged home with an antibiotic prescription.

Results: During the study period 8732 children visited the PED, while 13,1% received an antibiotic prescription. 1148 children were identified with a median age of 5 years (0,2-14 years). 25%-75% of children ranged from 3 to 8 years old. 56,4% were Greek, 21,6% were Roma and 22% of another nationality. A slight prevalence of males (54,8%) was noticed. The most common diagnoses leading to an antibiotic prescription were: upper respiratory tract infections (53,1%), lower respiratory tract infections (20,4%), skin infections and prevention of skin infections (15,7%), gastrointestinal infections (8,4%) and urinary tract infections (2,4%). Fever was present in 63,8% of cases. Most prescriptions were recorded in March.

**Conclusions:** Antibiotics are medications frequently prescribed in PED. Upper respiratory tract infections are the most common cause for antibiotic prescription. Physician's continuous therapeutic information and education is necessary in order to prevent inappropriate antibiotic prescribing.

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# IS HIGH VANCOMYCIN LEVELS IN NEONATES ASSOCIATED WITH HEARING LOSS? A CASE SERIES

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**Objectives:** To see if there is any evidence of association between high vancomycin levels and hearing loss in neonates.

**Methods:** This is a case series of 6 neonates who had documented high peak levels of Vancomycin of more than 40 mg/l with further follow up made regarding hearing loss. A total of 214 neonates received Vancomycin in a tertiary Neonatal unit between Jan 2001 and Dec 2004. Vancomycin was either administered intravenously as daily divided regime or continuous infusion.

Of the 6 Neonates, 3 were born at less than 28 week gestation, 2 were between 32-34 weeks gestation and 1 was a term neonate. Among 6 neonates 1 had high vancomycin levels due to drug error (10 times the prescribed dose) and 2 neonates had preexisting congenital renal problems accounting for the high levels. Vancomycin levels was more than 100 mg/l in 2 neonates. No intervention apart from reducing or spacing out the doses were made.

**Results:** There was no demonstrable hearing loss on Auditory Brainstem Response (ABR) for 2 infants done at 1 year of age. Other 4 neonates were followed up and there were no concerns reported by the parents regarding childs hearing.

Conclusion: This small case series suggests that Vancomycin does not appear to be ototoxic even in high levels and adds to the increasing evidence that Vancomycin is not associated with ototoxicity in neonates. Further research needs to be done for association of Vancomycin with hearing loss.

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## USE OF STEROIDS IN INOTROPE RESISTANT SEPSIS AND AT EXTUBATION IN UK PAEDIATRIC INTENSIVE CARE UNITS -TELEPHONE AUDIT

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**Aims:** Steroids are used in the treatment of severe (inotrope resistant) septic shock and for

some paediatric intensive care (PICU) patients at extubation. The aim of this audit is to establish the prescribing practice and protocols used with respect to corticosteroids for paediatric patients at time of extubation or during episodes of severe sepsis in paediatric intensive care units from the UK and Ireland.

**Methods:** Telephone audit of UK and Irish PICUs undertaken from Mar-Sept 2009 (n=20).

**Results:** In severe (inotrope resistant) septic shock, 90% (n=18) of units use steroids, all 18 use hydrocortisone, but only 33% (n=6) have a protocol. Dose ranges varied from 1mg/kg 8 hourly to 4mg/kg 6 hourly. Assessment of cortisol (either cortisol level or short synacthen test) is attempted by 67% (n=12) units prior to steroids. Onset and duration of therapy is determined by pragmatic clinical criteria in most units. For extubation, 100% (n=20) use steroids in some circumstances (Dexamethasone 90% [n=18], Dex and Prednisolone & Dex or Prednisolone both 5% [n=1]), with protocols in 30% (n=6) units. First dose varied from 24h pre-extubation to post extubation, dose range (dexamethsone) was 0.1mg/kg 8 hourly to 0.6mg/kg 6 hourly.

**Conclusion:** Corticosteroids are used in PICUs in the UK and Ireland for steroid resistant septic shock and extubation. Daily dose can vary by 800% (sepsis) and 533% (extubation), and numerous differing indications for commencing and discontinuing therapy. This data will aid in the design of studies to determine the optimal use of steroids in these conditions.

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# POISONINGS IN CHILDREN: A TWO YEARS' EXPERIENCE IN A DISTRICT HOSPITAL'S PEDIATRIC CLINIC

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**Introduction:** Poisonings in childhood are a usual cause of children's admission to a pediatric ward. The most usual toxic exposures and ingestions occur at home and involve drugs, cigarettes and nondrug products such as chemical substances, plants and hydrocarbons.

**Aim** of the study is to make an epidemiological recording of the poisoning incidents in a distict hospital's pediatric clinic during the period 2008-2009.

**Material-Methids:** 96 children were admitted in a two years' period and were studied according to age, sex, nationality and the ingested substance.

**Results:** 96/1228 (7,8%) children with a mean age 3,3y admitted because of a drug-substance poisoning . 80/96(83,3%) were greek, 13/96(13,5%) were roma and only 3/96(3,2%) were foreigners. The male children were significantly more (58/96(60,4%)) than the females (38/96(39,6%)). The majority of the incidents happened during fall (37/96(38,5%)) and spring (34/96(35,4%)). Fewer happened during summer (14,6%) and winter (11,4%) . 67/96(69,8%) were infants (1,0-3,0) y, 22/96(22,9%) were 3,1-6,0 y and 7(7,3%) were > 6 y.

19/96(19,8%) with a mean age 1,5 years old,ingested cigarettes and 48/96(50%) ingested drugs (3 of them attempted to suicide). The rest 29 cases involved non drug products (alcohol:5,hydrocarbons:8, cleaning substances: 9, plants:4, cosmetics:3)

None of these cases had adverse reactions.

**Conclusion:** Unintetional poisonings are common in children younger than 6 years of age, happen mostly at home and involve mostly cigarette and drug ingestion. Pediatricians must be aware and have to educate the parents in order the children to live in a safer environment.

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### EMPLOYMENT CHARACTYERISTICS OF RECENT PEDIATRIC NURSE PRACTITIONER GRADUATES IN THE USA: A WORKFORCE FOR THE HEALTH CARE OF CHILDREN

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**Aims:** Describe the characteristics of employment, children cared for, frequency of role functions by practice setting (primary care, specialty practice), and interest in doctoral education of recent PNP graduates.

**Method:** A 92-item multiple choice and short answer survey tool was sent to graduates from a convenience sample of universities.