HEALTH CARE ASSOCIATED INFECTIONS - REALITY OF A 3 YEARS OLD PAEDIATRIC HOSPITAL

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HEALTH CARE ASSOCIATED INFECTIONS (HCAI) in paediatric age represent an important cause of morbidity and are associated with long-term hospitalization and increased use of broad-spectrum antibiotics.

We used the definition of HCAI as when there was no evidence that it was present or incubating at the time of admission and infections acquired at the hospital but only evident after discharge.

GENERAL PAEDIATRIC WARD

- Paediatric department
- Paediatric surgery department

40 beds

- 18 single rooms
 - 1 with positive pressure system
- 7 double rooms
- 2 nurseries of 4 beds

DISCUSSION

- In the study presented, the prevalence of HCAI was 0.74%, which is a very low value compared to the literature that reports a prevalence of HCAI in paediatrics between 3.5% and 19.1%. This study was based on the System of Epidemiological Surveillance of nosocomial infections, which is mandatory.
- The new hospital facilities with more individual rooms and better areas along with a profound commitment of all the Health Team to prevent nosocomial infections were successful.

- Viral infections like RSV and Rotavirus are no longer the first cause of HCAI in our department. Bacterial infections caused the majority of HCAI in this study, with a predominance of *Enterobacteriaceae*, 2 ESBL strains, leading to the use of large spectrum antibiotherapy.
- A considerable number of complex chronic patients with long admissions had >1 episode, which shows that these patients present increased vulnerability and need special preventive measures.

Prospective observational study - 1st January 2015 to 31st December 2017

8288 inpatients in 3 years

System of Epidemiological Surveillance of Nosocomial Infections

61 patients with confirmed HCAI

89 episodes of HCAI
(12 patients with >1 episode)
1.5 episodes/patient

HCAI prevalence 0.74%

- Median age: 19 months
(1 month-18 years)
- Females 54% / Males 46%
- Median days of hospitalization: 14 days
(4-407 days)

39 (61%) patients with an Underlying Disease

Neurologic	13
Renal	10
Hematologic	10
Metabolic	4
Immunodeficiency	2

- Peripheral venous catheter – 48 patients
- Central venous catheter – 15 patients
- Urinary tract catheter – 7 patients

Isolated agent in 67 (75%) episodes

BACTERIAL INFECTION	n	VIRAL INFECTION	n
<i>Klebsiella pneumonia</i>	6*	Rotavirus	11
<i>Pseudomonas aeruginosa</i>	5†	RSV	10
<i>Escherichia coli</i>	4	Rinovirus	5
<i>Enterobacter cloacae</i>	4	Norovirus	3
<i>Staphylococcus epidermidis</i>	3	Adenovirus	2

*2 specimens Extended-spectrum beta-lactamases producer
†All specimens susceptible to all antibiotics tested

Antibiotherapy in 54 (61%) episodes

Vancomycin	16
Carbapenem	10
Amoxicillin/clavulanic acid	13
Cephalosporin	12
Piperacillin/tazobactam	5
Cotrimoxazole	3
Voriconazole	3

Intensive Care Unit

Prior stay	Transference
• 5 patients	• 2 patients
1 directly related death (Infant with ileostomy after gastroschisis correction – sepsis by <i>Klebsiella oxytoca</i>)	