Proton Pump Inhibitors prescription patterns and associated complications in the paediatric intensive care unit
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**BACKGROUND**
- Proton Pump Inhibitors (PPIs) are regularly prescribed in Paediatric Intensive Care Unit (PICU)
- **Indications** : Gastroesophageal Reflux Disease (GERD), Upper gastrointestinal bleeding management, **Stress ulcer prophylaxis**
- Risk factors associated with Upper gastrointestinal bleed (UGIB) are : **PRISM** (Pediatric Risk of Mortality) > 10, **Coagulopathy** ([INR > 1.5, Fibrinogen < 2g/L, Thrombopenia < 100 G/L = 100,000/mm³]), **Need for mechanical ventilation**
- Lack of evidence regarding the efficacy of stress prophylaxis for prevention of upper gastrointestinal bleeding in the PICU
- Recent studies have associated the use of PPIs with a higher risk of nosocomial infection in the ICU and hyponaetremia

**OBJECTIVES**
- Describe PPI prescription patterns in our PICU
- Explore potentially associated clinical complications like nosocomial infections and hyponaetremia

**METHODS**
- Single-centre retrospective cohort study
- CHU de Caen Paediatric intensive care unit
- 2 Year period from January 1st 2017 to December 31st 2018
- Approved by CHU de Caen ethics board
- Data were retrieved from medical records with a standardised case report form

**RESULTS**
- **Population characteristics**
- **Prescribed PPI**
- **PPI Group**
- **Non-PPI Group**
- **P-value**
- **Nosocomial infection (n %)**
  - PPI Group
  - Non-PPI Group
  - P-value
- **Duration of hospitalisation (days)**
  - PPI Group
  - Non-PPI Group
  - P-value

**LIMITS**
- Retrospective
- Single Center
- Confusion Bias : potential confounders adjusted with the logistical regression
- Indication Bias : a sicker population received PPIs → Resolved with propensity score matching analysis

**CONCLUSION**
- Overuse of PPIs
- Poorly documented medical indications
- Potential increase in the risk of nosocomial infection and hyponaetremia
- Risk – benefit ratio impossible to evaluate given the low incidence of UGIB in the PICU, the poorly documented efficacy of PPIs and risk of complications.
- Need for prospective multicentric studies and clinical practice guidelines