

“MIS-SOLD PPI?” - SEPSIS IN SURGICAL NICU PATIENTS AND THE USE OF ANTACIDS

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Aims: Sepsis is a leading cause of neonatal mortality. Antacids, either H2 receptor blockers or proton pump inhibitors (PPIs), have been reported as independent risk factors for sepsis. Sometimes antacids become necessary following surgery. Our aim was to identify the incidence of sepsis amongst surgical neonates on antacids.

Methods: Retrospective study over 34 months, January 2013 to October 2015. Admissions to the Neonatal intensive care unit (NICU) were identified using BadgerNet. Sepsis was defined as presence of positive blood culture in the clinical setting of infection. Demographics, diagnosis, comorbidities and use of antacids were recorded. Chi Square test was used for statistical analysis, $p < 0.05$ was significant.

Main Results: 2589 patients had total of 2710 NICU episodes. 442/2710 episodes were surgical, including all medically managed necrotising enterocolitis (NEC). 21% of all surgical patients were on antacids compared with 3.7% of medical patients ($p < 0.05$). The incidence of sepsis overall was 6.3% (171/2710). The total episodes of antacid therapy were 178/2710. In the entire population antacid therapy was not significantly associated with sepsis ($p = 0.57$).

There were 51/442 episodes of sepsis amongst surgical patients compared to 120/2268 medical episodes ($p < 0.05$).

71%(31/51) of all septic episodes in surgical patients were in context of NEC. The most common pathogens isolated were *Staphylococcus epidermis* (21%), *Enterococcus faecalis* (14%), *Coagulase negative Staphylococcus* (12%) and *Escherichia Coli* (11%).

Only 7/51(14%) septic surgical episodes involved antacid therapy as compared to 44/51 episodes without ($p = 0.17$), (Table 1).

Conclusions: In the NICU setting, sepsis was significantly more commonly seen in surgical patients as was the used of antacids. However, antacid therapy was not significantly associated with this higher incidence of sepsis.

Table 1 - Surgical Diagnosis of Patients with Sepsis on an Antacid

Diagnosis	Gestation (Weeks)	Co-morbidities
Inguinal hernia, necrotising enterocolitis	Term	IUGR, VSD
OA/TOF	32-36	Tetralogy of Fallot, IUGR
Gastroschisis, necrotising enterocolitis	Term	IUGR
Incarcerated inguinal hernia	24-27	Chronic lung disease
Necrotising enterocolitis	24-27	IUGR
Necrotising enterocolitis	28-31	Chronic lung disease
Necrotising enterocolitis	32-36	-