

PRE-FEED INTRAGASTRIC PH MEASUREMENTS IN HEALTHY PRETERM INPATIENTS

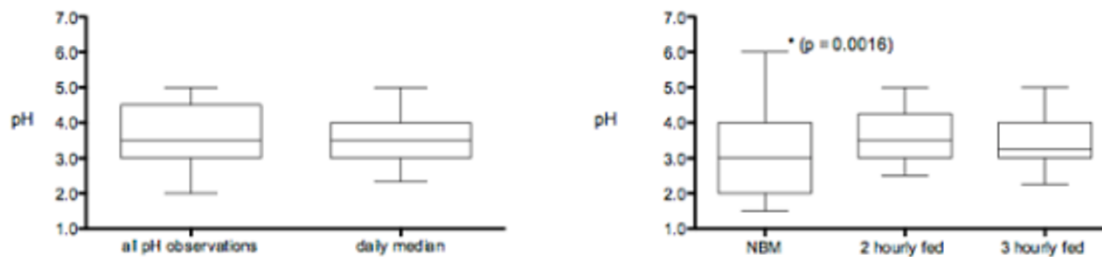
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Background and aims: The normal Reflux Index (percentage time with pH < 4) in preterm infants has a wide range (0.7 - 11.9%) reflecting the limited data for preterm infant. A recent UK National patient safety alert led to a change in practise requiring that the position of a nasogastric tube has to be confirmed by checking the acidity of gastric aspirates prior to a feed.

Methods: The pH of gastric contents (n=1727) were recorded in 38 inpatients in an NICU using pH indicator strips.

Results: The period over which data was collected equated to 215 patient days. Infants had a mean postmenstrual age of 32 weeks (range 27- 40). The pH testing strip measurements were reproducible (coeff. var.: $3.21 \pm 1.7\%$ (mean \pm s.e.m.)) and comparable to those obtained by standardised pH meter (mean difference: -0.3 to 0.3; ^{1.96}SD: 0.48)). The median pH for all the observations was 3.5 (IQR 1.5). Infants who were nil by mouth had a significantly lower median gastric pH than those who were bolus milk fed.



[pH data, median, 5- 95th percentile]

Conclusions: The median gastric pH value of 3.5 in our preterm population is lower than expected from previous published data on Reflux Index. This was not affected by the feeding interval, although gastric pH was lowest in infants who were nil-by-mouth.