Background Vancomycin is commonly used in neonatal intensive care for suspected or proven Coagulase Negative Staphylococcus [CoNS] sepsis. Achieving the therapeutic level is important but sub-therapeutic levels are common. There is little data to guide dosage adjustment.

Method A retrospective audit on vancomycin use was undertaken, using standard 24 hourly dose interval in extreme premature babies [< 29weeks]. Finding resulted in a change of dose frequency to 18hrly: a prospective audit was then performed.

Result Of the 27 extreme premature babies on 24 hrly vancomycin, 70% had sub-therapeutic levels; 20% had normal levels. 1 baby [4%] with abnormal renal function had high level.

A subsequent prospective audit of 20 babies [dosed 18 hrly], showed 70% with sub-therapeutic levels, 25% with normal levels; one baby [5%] with abnormal renal function had high level.

The commonest correction for sub-therapeutic levels was to increase the dose by 10%; only 33% of repeat levels were then in normal range. Up to 4 dose increases were required to achieve the therapeutic target.

Conclusion Increasing vancomycin dosing frequency to 18 hrly produced no increase in the number of therapeutic or sub-therapeutic levels, but might theoretically result in longer periods of therapeutic drug levels during the course.

On finding the sub-therapeutic levels, there should be flexibility in approach as 10% increase in dose is often ineffective; perhaps, change in frequency should also be considered. More studies are needed to guide the rapid achievement of therapeutic drug levels.

PREMEDICATION FOR NEONATAL INTUBATION: CURRENT PRACTICE IN THE TERTIARY NEONATAL UNITS IN THE UNITED KINGDOM

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Background Evidence clearly shows that awake intubation is associated with a significantly higher intracranial pressure, higher blood pressure, and more variable heart rate than premedicated intubation. The last national survey was over 10 years ago. Recently there has been promising research on use of Propofol during neonatal intubation which showed it to be more effective than the morphine, atropine and suxamethonium.

Aims To establish and up to date census on the current use of premedications to facilitate neonatal intubation in the UK tertiary neonatal units.

Design and methods Telephone survey included all the 44 tertiary neonatal units in the UK. Professionals were asked about their current practice in use of premedications during neonatal intubation.

Results 44 tertiary neonatal units were contacted and all units use premedications to facilitate intubations. 40 of the 44 units (91%) have written guideline or protocol. 6 premedication drugs are being used in 10 different combinations.

Combination of Fentanyl, Atropine and Suxamethonium is the most commonly used drug regimen used by 16 of 44 units (36%) while 2nd most popular regimen (used by 25%, 11 of 44 units) included combination of Morphine, Atropine and Suxamethonium. Propofol is being used in only one unit.

Conclusion Use of premedications to facilitate intubation has become standard practice across the tertiary neonatal units in the UK. However practice varies in terms of choice, number and doses of premedication drugs. Six premedication drugs are being used in 10 different combinations/regimens which vary from 1–3 drugs.

WHAT IS THE EXTENT OF EXCIPIET INTAKE IN THE PICU PATIENT?

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Background Many medications used in PICU contain excipients which are classed as non-pharmaceutically active ingredients. There is increasing reports of adverse effects attributed to these agents. This study looks for recommendations of maximum levels and actual excipient intake in 5 PICU patients.

Methods EmBASE, Medline, UK and International guidelines were searched for adverse effects, pharmacokinetics, maximum doses for non-pharmaceutically active ingredients. The medication intake for 5 PICU patients was recorded and excipient content calculated where available.

Results There were 49 medications administered, no excipient information could be found for 8. There was 255 excipients listed in the remaining 42 medicines, complete excipient information was available for 41/49 medicines. Maximum upper limits were found for sorbitol (0.5g/kg), Propylene glycol (25mg/kg) and hydroxybenzoates (10mg/kg). Only a lethal dose was found for ethanol (3.8ml/kg), there was a recommendation that no ethanol should be contained in medicines for under 6 year olds.

 Whilst excipient intake calculation was not complete due to lack of response or availability of information from the manufacturer, each patient received a medicine containing ethanol. Patient 3 and...