antibiotic treatment can be evaluated. Early initiation of maternal antibiotic therapy is associated with shorter durations of hospital stay for newborns. Close follow-up of mothers with high risk pregnancies and extension of treatment duration are critical for determining prognosis in newborn infants.

1161 QUANDRY OVER THE USE OF ANTIFUNGAL PROPHYLAXIS IN PRETERM INFANTS: SURVEY OF CURRENT PRACTICE IN THE UNITED KINGDOM

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Introduction Prophylactic anti fungal use reduces the incidence of colonisation and invasive fungal infection in premature neonates. We surveyed the current regimens for the use of antifungal prophylaxis in the tertiary neonatal units across the UK.

Method We enquired about indications for use, drug of choice for prophylaxis, criteria for stopping the prophylaxis and drug used for suspected or proven fungal infection.

Results Out of 52 units 42 [81%] responded. 7 units [17%] did not use any prophylaxis. 26 units [62%] had guidelines on the use of anti fungal prophylaxis. 9 units [21%] used prophylaxis but did not have any guidelines. Of the units using prophylaxis, 43% used birth weight as a criterion ranging from < 750grams to < 1.2kilogram. 51% of units used gestation as a criterion ranging from < 25weeks to < 32 weeks. 20% of units used antibiotic use as their only criterion for starting prophylaxis. 31% used presence of longline as a criterion. Small number of units used abdominal surgery, prolonged intubation, NEC, Candida colonisation, postnatal steroids and ranitidine as a criterion. The commonest drug used for prophylaxis was fluconazole [50%]. 29% of units used nystatin and 12% of units used miconazole gel. 26% of units used the same prophylactic drug when treating suspected or proven fungal infection.

Conclusion Despite evidence of the efficacy of anti-fungal prophylaxis, 17% of tertiary units are not using antifungal prophylaxis for infants at high risk. There remains considerable heterogeneity in indications and the specific antifungal used for prophylaxis.

1162 COMPARATIVE ANALYSIS OF STAPHYLOCOCCUS EPIDERMIDIS STRAINS ISOLATED FROM NEWBORNS

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Staphylococcus epidermidis are important opportunistic biofilm forming pathogens, particularly causing infection in patients with indwelling medical devices. Preterm infants represent a high-risk group for device-related *S. epidermidis* infections since they require the delivery of nutrients and drugs over long periods.

The present study compared genetic and phenotypic characteristics of *S. epidermidis* strains isolated from blood stream infections of preterm infants (n=10) versus skin isolates obtained from healthy newborns (n=16). Two reference strains were also included the study. Insertion element IS256, as a marker for invasiveness, was analysed by PCR. Antimicrobial susceptibility was testing against cefoxitin, gentamicin and vancomycin. Pulsed-Field Gel Electrophoresis was performed to study clonal relationship among strains.

90% of the blood isolates were resistant to cefoxitin and gentamicin and all these carried IS256. All skin isolates were susceptible to both cefoxitin and gentamicin and all lacked IS256. All of the 28 strains included in the study were susceptible to vancomycin.

We conclude that the *S. epidermidis* strains isolated from blood stream infection in preterm infants are clonally not related to the normal colonizing *S. epidermidis* skin flora at birth, have different phenotypic features related to antimicrobial susceptibility, and have most probably originated from the hospital environment.

1163 EPIDEMIOLOGY OF PROVEN NOSOCOMIAL SEPSIS IN LOW BIRTH WEIGHT INFANTS ADMITTED IN THE LEVEL 3 NEONATAL INTENSIVE CARE UNIT

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Background Nosocomial infections remains a leading cause of morbidity and mortality in Neonatal Intensive Care Unit(NICU).

Aim To assess incidence, etiology and outcome of culture-proven nosocomial sepsis in low birth weight(LBW) infants.

Methods Retrospective study of preterm infants with birth weight < 1500g and proven nosocomial sepsis admitted in NICU of Hospital Carlos Haya during 2011.

Results Sixty neonates experienced at least one or more episode of nosocomial sepsis out 160 LBW infants meaning an incidence of 37.5%. 61% positive blood culture. Table one. Mortality was 6.6% of all patient with proven sepsis and 4% of all positive blood culture. In our series fungal sepsis were the most aggressive being responsible of the 50% of deaths.

Abstract 1163 Table 1 Etiology of nosocomial infections during 2011

Gram Positives	Coagulase negative Staphylococcal (including <i>S.epidermidis</i>)	67%(38% <i>S.epidermidis</i>)
	Enterococcus spp	7%
	<i>S.aureus</i>	1%
Gram negatives	<i>Klebsiella pneumoniae</i>	7%
	<i>Serratia marcescens</i>	5%
	<i>E.coli</i>	1%
	<i>Enterobacter</i> spp	4%
	<i>Pseudomonas</i> spp	5%
	Other gram negatives	1%
Fungal	<i>Candida</i> spp	2%

Conclusions Overall infections rate is similar to the current reports for level 3 hospitals. Gram positives organisms were common being *S. epidermidis* the most frequent. Related to gram negative *K. pneumoniae*, *S. marcescens* and *Enterobacter* were the most frequently isolated. No cases of expanded spectrum of betalactamases bacterial. Mortality is less than previously reported.

1164 REDUCTION IN FUNGAL SYSTEMIC INFECTIONS IN PRETERM NEONATES WITH NYSTATIN PROPHYLAXIS

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Background Invasive fungal infection is an important cause of mortality and morbidity in the very low birth weight (VLBW) and the extremely low birth weight (ELBW) infants. A policy of oral nystatin prophylaxis was introduced with the aim of reducing the incidence of invasive fungaemia among high risk neonates.

Aim To determine whether this policy had reduced the rates of invasive fungal infection.

Methods In December 2004 oral nystatin prophylaxis implemented for babies with birth weight equal or < than 1250 grams starting on 3rd day of life till they retain their birth weight. In 2010

prophylaxis was extended to neonates of birth weight of 1500 grams and below. The rate of invasive fungaemia was monitored as part of an ongoing CQI project to reduce nosocomial infection rates in the NICU.

Results 799 VLBWI were admitted during the study period out of which 227 were ELBWI. There were no differences in birth weight, gestation and gender distribution.

Abstract 1164 Table 1 Episodes & Rate of Fungaemia

	2004	2005	2006	2007	2008	2009	2010	2011
Episodes	13	3	2	1	1	0	2	0
Number of Vlbwi	92	91	99	93	100	99	95	97
Rate	14%	3.3%	2%	1.1%	1%	0	2.1%	0

P<0.001.

Conclusions The introduction of a prophylactic oral nystatin administration policy was associated with a significant reduction in invasive fungal infection among high risk neonatal population.

1165 RECTAL SWABS: AN INCREASINGLY IMPORTANT COMPONENT OF NICU INFECTION SURVEILLANCE PROGRAMMES?

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Background and Aims Gram-negative bacteria present an increasing threat to NICU babies. Because the gastrointestinal tract is the primary colonisation site, we added rectal swabbing to routine admission and weekly screening of babies from September 2010. We consider here the impact of this strategy on clinical and infection control management.

Methods Rectal swabs were cultured for the following Gram-negative bacteria of interest (GNBi): Serratia; gentamicin-resistant &/or ESBL-producing Enterobacteriaceae; Pseudomonas aeruginosa (PA). Colonised babies were isolated, but were not treated with antibiotics unless clinically indicated.

Results GNBi (except PA) were isolated from 55 (2.6%) of 2101 admissions, September 2010–March 2012: 21 gentamicin-resistant Enterobacteriaceae; 9 ESBL-producing Enterobacteriaceae; 25 Serratia. 45 of the GNBi were detected in rectal swabs: in 38 (64.7%) rectal swabs were the first, and in 28 (33.3%) the only, culture-positive samples. Only one baby had GNBi infection (bacteraemia on the same day as a positive rectal swab).

There were 13 instances of 2–3 babies having the same bacterium within 7 days of each other. In one case, seven babies were found with Serratia over 7 days. PA results are not shown for the first 7 months, because of an exceptional event causing PA colonisation then. After April 2011 there were 5 cases (4 detected on rectal swabs: the only positive site in 3): there was no clustering of these cases.

Conclusion An unexpectedly high proportion of NICU babies had GNBi. The high frequency of patient-to-patient transmission suggests that rectal screening can be an important tool in controlling these bacteria.

1166 PERFORMANCE OF THE DEFINITIONS OF THE SYSTEMIC INFLAMMATORY RESPONSE SYNDROME AND SEPSIS IN NEWBORNS

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Background and Aims In 2002 the International Pediatric Sepsis Consensus Conference created definitions for the systemic

inflammatory response syndrome (SIRS) and sepsis adoptable for paediatric patients. We aimed to examine the applicability of the pediatric definitions of SIRS and sepsis to newborns in the diagnosis of early (EOS) and late onset sepsis (LOS).

Methods Retrospective cohort study including

1. all term newborns hospitalized within the first 24 hours of life and
2. all infants with episodes of suspected LOS with a corrected gestational age of >37 weeks at onset of LOS from 2004 to 2008.

Results Thirteen of 245 newborns included had culture proven EOS (5%) and 5 newborns had culture proven LOS. SIRS and sepsis criteria applied to 38% of EOS positive infants and to 100% of LOS positive infants. The two major diagnostic criteria white blood cell count and fever/hypothermia, of which at least one has to apply for fulfilling SIRS and sepsis criteria, had a sensitivity of 15% and 38% in diagnosis of EOS and of 100% and 80% in diagnosis of LOS, respectively.

Conclusions The definitions of SIRS and sepsis applied to all cases of culture proven LOS. However, the single diagnostic criteria were insensitive in diagnosis of culture proven EOS with thus wrong classification of more than 60% of all cases. An evidence based approach to find the appropriate criteria for defining EOS in newborns is needed.

1167 DOES MATERNAL INTRAPARTUM ANTIBIOTICS PROLONG THE INCUBATION TIME REQUIRED FOR BLOOD CULTURES TO BECOME POSITIVE FOR INFANTS WITH EARLY-ONSET SEPSIS?

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We hypothesize that maternal intrapartum antibiotic treatment delays the growth of organism in the blood culture obtained during the workup for infants with suspected early-onset sepsis (EOS). The aim is to determine if maternal intrapartum antibiotic treatment prolongs the time to blood culture positivity in infants with EOS.

Methods Single center, retrospective review of infants with blood culture-proven EOS over a 12 years period. EOS was defined by isolation of a pathogen from blood culture drawn within 72 hours of birth and antibiotic treatment for ≥5 days. The automated bacteraemia detection was with BacTAlert Peds bottles.

Results Among 88 infants with positive blood culture; 38 were deemed to have EOS, and 50 were deemed contaminants. Seventeen with EOS did not receive intrapartum antibiotics and had blood cultures drawn for being symptomatic after birth. The other 21 infants received intrapartum antibiotics and had EOS workup primarily for maternal chorioamnionitis. The median (IQR) time to blood culture positivity in all 38 infants with EOS was 19.7 h (16.5 h, 22.5 h), and the organisms grown were: Escherichia Coli in 17, Group B Streptococcus in 10, Alpha hemolytic Streptococci in 6, and other organisms in 5. The median (IQR) incubation time to blood culture positivity was not different in infants who received intrapartum antibiotics compared to infants who did not (19.6 h, IQR 16 h–28 h, versus 19.5 h, IQR 17.2 h–21.6 h, p=0.7489).

Conclusion Maternal intrapartum antibiotic treatment did not delay the time to blood culture positivity in infants with EOS.

1168 MICROBIAL PROFILE BY BACTEC IN A LEVEL THREE NEONATAL INTENSIVE CARE UNIT IN RURAL WESTERN INDIA

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