Background and Aims  To determine the demography, clinical manifestations and the most common organism isolated of the urinary tract infection (UTI) in the newborn infants who were admitted to the neonatal intensive care unit (NICU).

Methods  Newborn infants diagnosed with UTI were investigated retrospectively, clinical and demographic characteristics of infants were collected from the medical records in the NICU. Urine cultures were obtained by suprapubic aspiration or urinary catheter.

Results  Fifty-one infants were included in this study. The mean (±SD) gestational age and weight of infants were 31.53±4.32 weeks, and 2496±4.32 g respectively. Male patients accounted for 56.9% of the study group. Infants born with cesarian section were 25.4%. The most common presenting symptoms were vomiting in 39(76.5%) infants, desaturation in 34 (66.7%) infants, tachycardia in 31 (60.8%) infants, apnea in 21 (41.2%) infants and jaundice in 18 (35.3%) infants.

Conclusions  The incidence of UTI in newborn infants is 0.1–1% and it can be as high as 10% in low-birthweight and preterm babies. The presentation of UTI in the neonatal infants is non-specific and the most common clinical manifestations are vomiting, fever, enteral feeding intolerance, apnea and bradycardia. In this study, desaturation and tachycardia are also shown as presenting manifestations of UTI. Klebsiella pneumonia was the dominant microorganism isolated in 22 (43.13%), followed by Escherichia coli in 13 patients (25.4%). The most common presenting symptoms were vomiting in 39 (76.5%) infants, desaturation in 34 (66.7%) infants, tachycardia in 31 (60.8%) infants, apnea in 21 (41.2%) infants and jaundice in 18 (35.3%) infants.

Methods  Two-hundred milligrams faeces were collected for each subject and processed for DNA extraction, performed with QIAamp DNA stool Mini Kit (Qiagen, Cat. No. 51504). Lactobacillus spp., Bifidobacterium spp., Bacteroides fragilis group, C. difficile and E. coli quantification was obtained with real-time PCR. Data of microbial counts were subjected to one-way variance analysis in order to evidence significant differences between treated and control group of newborns.

Results  Antibiotic therapy reduced the intestinal colonization of Bifidobacterium: 5.51 Log(CFU/g) in treated samples against 7.07 Log(CFU/g) in control samples; P<0.05. All the others microbial genera and species analysed were not affected by the maternal treatment with Amoxicillin.

Conclusions  Preliminary results showed a decrease of early Bifidobacterium count in the microbiota of newborns; the clinical meaning or the effect on newborn immunity need to be investigated with larger studies.