Background and Aims  Peripherally inserted central venous catheters (PICCs) are commonly used for neonatal vascular access. Early catheter-related sepsis and catheter non-infectious complications are linked with initial dressing method. We evaluate efficacy of our specific PICCs insertion protocol with trained nurses and doctors.

Methods  We observed prospectively 1686 PICC procedures in neonate (0–28d) from 2002 to 2011. Silicon PICCs were inserted from 0 to 26 days corrected age. Procedure followed our specific protocol.

Results  1686 PICCs were attempted with a success rate of 96.2% in neonates with a mean gestational age of 29.7 weeks at a median age of 3 (0–94d) days of life.

In the successful PICCs, median number of venous puncture was 1 (1–13), median time spent was 20 (5–120) minutes, device change in 11.7% and site change in 5.9%. Median temperature difference between the beginning and the end of the procedure was very low: -0.2°C (-1.5 to 1.8). 187 complications (11.5%) occurred: 105 diffuse, 64 local, and 18 systemic. There were 325 dressing changes (19.1%) and 753 catheter exchanges (44.9%). There were 261 dressing site infections (15.5%), 106 silicon catheter infections (6.3%), and 99 other infections (6%). 13 PICCs were removed for infection (sepsis or local mycosis).

Conclusions  Standardized protocol with specific nurse and doctor leads to a success rate of 96.2% with a small time spent for insertion and a median of one attempt mostly in the initial chosen site. This quick method leads to low neonate cooling and expose patients to minimal infection risk and complications.

Background and Aims  Metabolic risk factors of children with urolithiasis are linked with initial dressing method. We evaluate efficacy of our specific PICCs insertion protocol with trained nurses and doctors.

Methods  This retrospective study enrolled 52 boys, 51 girls with urolithiasis diagnosed by ultrasonography. Mean age at presentation was 60 (1–192) months, and mean follow-up period was 5.5 (1–27) months.

Results  The most common symptom was restlessness in infants (<1 year), while it was abdominal or flank pain in older children (<p=0.001). Microcalculi (stone diameter <5mm) and calculi (>3mm) were found in 26% and in 74% of patients, respectively. Hypercalciuria was the most common abnormality, followed by hypomagnesuria (Table 1). Recurrent urinary tract infection (UTI) was detected in half of the patients. Four patients underwent ESWL, five underwent open surgery, and the other 94 were treated with conservative therapies. Spontaneous passage occurred in 19 patients. Stone analysis revealed calcium-oxalate in 85%. At the time of their last visit, in 70% of the patients with conservative therapies, the stones were disappeared or diminished in size by appropriate therapy such as water intake, diet, hydrochlorothiazide and potassium-citrate.

Conclusion  Identifying the underlying metabolic risk factor is important in order to choose the appropriate treatment modality, prevent stone recurrence and renal damage. Patients presenting with restlessness, especially infants must be evaluated in terms of renal stone disease by ultrasonography.