

VID-27

Supine percutaneous nephrolithotomy (PCNL) in a tetraparetic patient with skeletal deformity

I. Kartalas-Goumas, F. Dell'Aglio, E. Itri, F. D'Addezio, F. Pozzoni, C. Gargantini, L. Innocenti, G. Zanetti
Vimercate Hospital, Vimercate, Italy

Introduction: We present the technique of PCNL in the supine position in a paraplegic patient with skeletal deformities and a tracheostomy.

Materials and Methods: A 60 year old female patient affected by spastic tetraparesis and skeletal deformity as a result of cerebral hemorrhage (fig.1) presented a right lumbar ureteral stone (2,3 x 10 mm) and multiple right kidney stones with hydronephrosis: a 32 x 17 mm pyelic stone and a 19 x 17 and 11 x 8 mm upper caliceal stones (fig.2). She had also a tracheostomy and a percutaneous gastrostomy. First a percutaneous nephrostomy was placed and then a ureteroscopy was performed removing the ureteral stone. Finally a PCNL was performed. Because of the tracheostomy and the severe ankylosis, the procedure was performed in the supine position (Galdakao modified Valdivia). A new, single, subcostal percutaneous access was performed under ultrasound and fluoroscopic guidance. A one shot dilatation of the tract was performed up to 24 Fr (fig.3). Using a rigid nephroscope and combined ultrasonic and ballistic lithotripsy the pyelic stone was removed. Then, a flexible nephroscope was introduced in the renal cavities and the upper pole was accessed. A holmium laser lithotripsy of the upper calyceal stones has been performed and all fragments were removed with a nitinol basket (fig.4). A 8 Ch nephrostomy has been left in place at the end of the procedure. The operative time was 2.2 hours.

Results: No intra or postoperative complications were observed. At a CT scan at three months the patient was stone free.

Conclusions: PCNL in the supine position is feasible and effective even in cases with abnormal body habitus and paraplegia. It can be a valid alternative to the prone position when the later is difficult to perform as in cases with skeletal deformities or when the airway management is difficult.

Figure 1. Patient

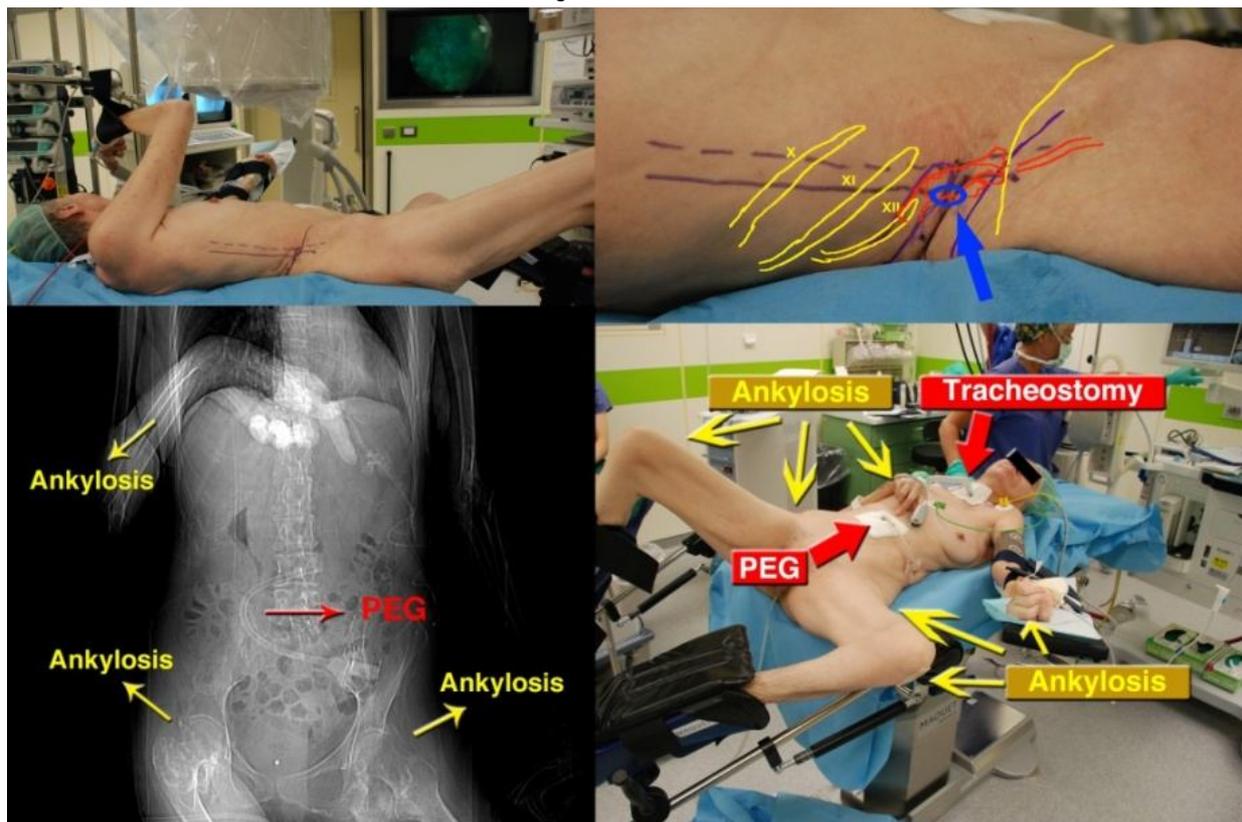


Figure 2. Stones

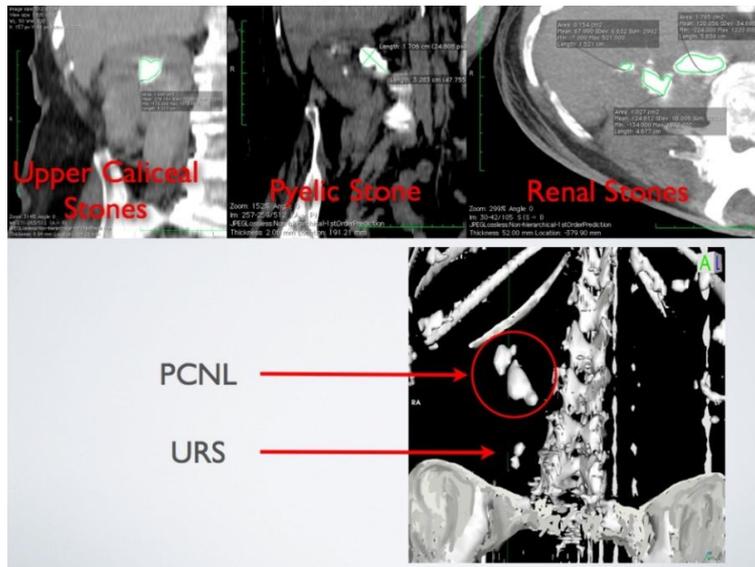


Figure 3. Access

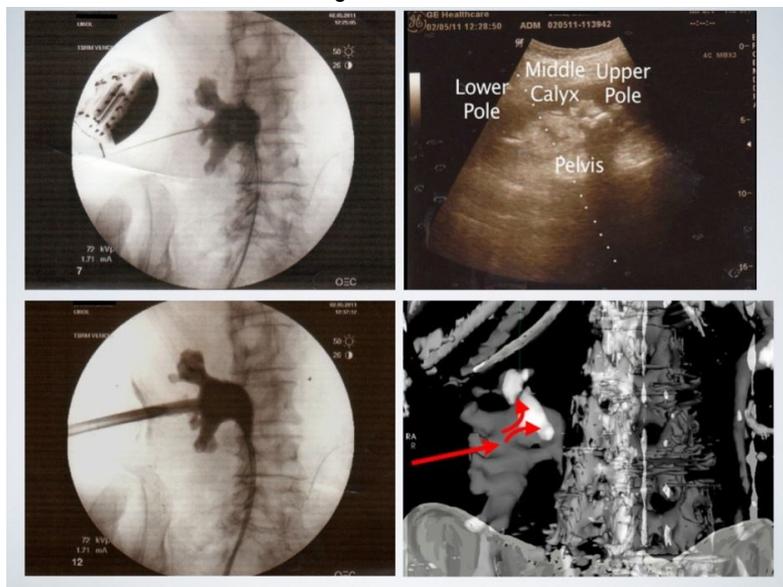


Figure 4. Flexible Nephroscopy

