83 Can we reduce the number of punctures during PNL's in patients with spidery pyelocaliceal systems?

European Urology Supplements 2019;18(2):e2390

Radu V.D. , Andriciuc R. , Costache C.R.

Parhon Hospital, Dept. of Urology, Iasi, Romania

Introduction & Objectives: The percutaneous approach of spidery pyelocaliceal systems associates significant difficulties; among them is the puncture of a posterior calix and this accounts for multiple attempts, even if fluoroscopic or ultrasonic guidance is employed. We present a novel technique of puncture and the results.

Materials & Methods: In our department, more than 100 PNL's are performed each year. In the last 2 years (March 2017-Febr 2019), 21 patients with spidery pyelocaliceal system underwent percutaneous approaches of pyelocaliceal stones. Preoperatively, the CT scan images were used to measure and to determine the exact point of entry for puncture of a posteroinferior calix, by assessing the distance from the midline to the lateral skin projection of the long axis of the calix; this proved to be extremely variable and different from the lateral margin of the paravertebral muscles, that is usually used as a landmark. With the patient in prone position, the exact point of access was determined, by intersecting the parallel line with the spine, at the previously measured distance, with the line that prolongs the long axis of the calix observed fluoroscopically.

Results: By utilising this technique, the exact point of puncture was precisely determined in all 21 patients, avoiding the tedious search for the ideal place of puncture in different places. This way, the number of attempts to reach the calix was reduced; in 15 cases we succeeded after the first puncture and in the rest of 6 cases after the second attempt, but through the same point at the skin level. The mean number of attempts was 1,28.

Conclusions: By utilising this technique, the exact point of puncture at the skin level was established, allowing a transpapillary percutaneous access in the long axis of the required posterior calix. Thus, the number of attempts to puncture a posterior calix of a spidery pyelocaliceal system was significantly lowered.