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Editorial

Comments on article «A new technique to perform percutaneous nephrolithotripsy in "total dorsal decubitus position"»

Comentario editorial al trabajo «"Nueva técnica para realizar nefrolitotripsia percutánea "decúbito dorsal total"»

It has been several years since Valdivia first described the supine position for percutaneous nephrolithotripsy (PNL), and more than a decade since the publication of a major series (557 nephrolithotomies) performed with the patient in said position that proved its viability, reproducibility, and efficacy.[1] However, it has been only in past few years that urologists have shown more interest in this position, and studies on supine PNL have become more frequent;[2-4] for this reason, reasonable evidence has begun to appear suggesting that there seem to be no differences between the supine and the prone positions in terms of stone clearance rates and morbidity.

The advantages of this position are obvious -no interference with ventilation and venous return (particularly in obese patients), the surgeon can work in a more ergonomic position with less X-ray exposure- and these arguments should suffice to banish the prone position as long as outcomes and morbidity remain equal; however, urologists with ample experience in percutaneous surgery are unquestionably reluctant to abandon the prone position; based on the absence of sufficient studies and on the difficult learning curve of the supine approach; in my opinion, however, this attitude is explained by the inertia of the habit of using a technique that yields good outcomes.

This is why the study by Melchert et al published in this issue, "A new technique to perform percutaneous nephrolithotripsy in total dorsal decubitus position",[5] which reports the experience of three Brazilian centers, should mitigate the aforementioned scarcity of studies. This large series included 1775 cases in total dorsal decubitus between 1996 and 2009; the mean surgical time was 48 min, and an excellent stone clearance rate (81.8%) was achieved with a minimal rate of complications (1.12%). While the mean stone size is not described, it is important to note that they operated 342 staghorn calculi and 156 proximal ureter lithiases.

The authors emphasize that their supine position is different from Valdivia's in several ways: The decubitus is total, as they do not use a pad to lift the flank operated on; the ipsilateral lower extremity is positioned in slight abduction, and the contralateral extremity in an abduction similar to that of the lithotomy position. Furthermore, the ipsilateral upper extremity is abducted. This position permitted conducting a cystoscopy and ureteral catheterism; in cases of proximal ureteral lithiasis, a rigid ureterorenoscopy with a retrograde approach to the lithiasis was done, or else a subsequent percutaneous nephroscopy was done if the calculus migrated into the renal cavities.

The definitive argument that would make the supine position widely accepted is probably the ease of retrograde access to the kidney not only for the necessary opacification and distension of the excretory pathway for puncture, but also for the simultaneous percutaneous approach with flexible ureterorenoscopy, which provides a more versatile access to the various calyces and thus reduces the number of percutaneous paths. Thanks to improved flexible ureterorenoscopes, to miniaturized laser fibers and nitinol baskets, the consolidation of combined intrarenal endoscopic surgery will render this position the new standard, as some authors have already remarked.[6]

I would like to raise some issues regarding this position. Ibarluzea systematized the combined simultaneous approach with a modified Valdivia position by separating and flexing the lower extremities.[7] The position that the authors call new differs only in details with respect to the Galdakao position, but I don't believe it improves it, as the use of a pad under the flank (as originally described by Valdivia) facilitates the exposure of the posterior axillary line and mandates the positioning of the ipsilateral extremity flexed over the thorax, thus offering more room for the surgeon and assistant to work.

Two controversial circumstances of the supine position are the treatment of staghorn calculi and supracostal access.[2] Effective clearance of staghorn calculi occasionally requires accessing the upper calyx because this provides direct access

to the axis of the kidney cavities; however, in the supine position the upper pole is farther away from the cutaneous puncture site than in the prone position, possibly making this approach difficult. Moreover, this position is said to offer less room than the prone position for accessing the various calyces, which is occasionally necessary to treat staghorn calculi. Unfortunately, this study, which reports the treatment of 342 staghorn lithiases (19.2% of the total), does not stratify the outcomes per type of calculi in order to know the stone clearance rate and the number of upper calyces approached and of pathways employed.

Our team currently approaches staghorn calculi in the Galdakao position, preferably through access to the lower calyx, with simultaneous flexible ureterorenoscopy or by using a second, smaller pathway to the upper calyx. The selected technique depends on the morphological characteristics of the stone. The second option is indicated only when the stone load is large in the upper calyces. The Amplatz Sheath® in the lower tract, in addition to securing the kidney, also permits to move it caudally in order to lower the costal puncture site, thus facilitating puncture in this position.

Finally, the key issue of puncture in renal percutaneous surgery is simpler in the supine position, and the second learning curve for those already experienced in the prone position is much shorter. Let's then change for the better.

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