
Complete Supine Percutaneous Nephrolithotripsy Comparison With the Prone Standard Technique: The Time for Change From Prone to Supine Position Has Come!

José Gabriel Valdivia-Uría

Urology Department, Clinical University Hospital Lozano Blesa, Saragossa, Spain

Submitted on February 26, 2009 - Accepted for Publication on March 2, 2009

LETTER TO THE EDITOR

Dear Dr. Andersson:

More than two decades have passed since the first time my colleagues and I described the percutaneous nephroscopy technique in supine position [1-3]. Curiously, it is only during the last 5 years that interest in this technique has risen significantly.

Very few urologists have dared to perform this technique; when they do, they become its best defenders. Some of them have published their results [4-6]. Many others have not, despite having successful experience with it.

Today, many publications and editorial comments are appearing about the percutaneous nephrolithotomy in supine position [7-27]. These publications do nothing else but support the conclusions we already pointed out 22 years ago. Mainly, that it is an easy to perform and reproducible technique that has a smaller risk of hands irradiation and a more comfortable working position for the urologist. Additionally, that with this technique the calicial puncture is more easily executed because the needle follows a plane that is perpendicular to the one on the X-ray. This allows the surgeon to better judge the moment when the needle contacts the renal capsule and the way in which the calicial cup is deformed before being crossed by the needle. This nearly eliminates the need to resort to the rotation of the radiologic C arm in search of a second orientation plane.

Another important advantage is that the same slope of the access route facilitates the spontaneous exit of many stone fragments. Some physicians who do not support this technique [26] find it is inconvenient that the pielocalicial system does not expand totally when the patient is in supine decubitus. We believe that this is actually advantageous, because if at any moment a pielocalicial distention should be needed, it would be enough to adjust the gauze we usually knot at the nephroscope tube to the Amplatz hole. We commonly use this gauze to drive the liquid that overflows from the kidney to the collecting bag.

As we pointed out in our first publications, it is possible to simultaneously conduct our technique and a rigid homolateral ureterorenoscopy. We use this combination (supine PNL and rigid URS) only in very complicated lithiasis cases. Nevertheless, other authors use it almost systematically and with excellent results [28, 29].

Other advantages, described in our earlier publications, are the ones that this position provides for the patient. Specifically, the diaphragm is not elevated and the cave vein is not smothered so there are no obstacles to ventilation and the venous return is not difficult. The patient is not exposed to possible yatrogenia (cutaneous or nervous lesions caused by decubitus in leaning zones). All of this facilitates the possible usage of local anesthesia. When used with appropriate sedation and monitoring of the patient, this diminishes surgical risk, especially in patients who are old, obese, or have severe lung disease. No less important is the saving

of time, money, and the decreased risk of other possible yatrogenia because of avoiding a postural change in the patient during surgery.

From our point of view, the percutaneous nephrolithotomy performed with the patient in supine position offers such a wide variety of advantages that we still do not understand why the majority of urologists insist on following the same routine. Sadly, day by day they go on stumbling with the same inconveniences of the prone decubitus.

Sincerely yours,

Prof. José Gabriel Valdivia-Uría M.D.

Jefe de Servicio de Urología

Hospital Clínico Universitario Lozano Blesa Avenida San Juan Bosco, 15

50009 Zaragoza - España

Email: valdivia@unizar.es

NOTE: A Power Point presentation on this topic is available by clicking on the link attached to this author's letter on http://www.urotoday.com/urotoday_international_journal/

REFERENCES

- [1] Valdivia-Uría JG, Lanchares E, Villarroya S, Taberner J, Abril G, Aranda JM. Nefrolitsectomía percutánea: Técnica simplificada (nota previa). [Percutaneous nephrolithotomy: simplified technic (preliminary report)]. *Arch Esp Urol*. 1987;40(3):177-180.
- [2] Valdivia-Uría JG, Valer J, Villarroya S et al. Why is percutaneous nephroscopy still performed with patient prone? *J Endourol* 1990;4(3):269-277.
- [3] Valdivia-Uría JG, Valle Gerhold J, López JA et al. Technique and complications of percutaneous nephroscopy: experience with 557 patients in supine position. *J Urol*. 1998;160(6 Pt1):1975-1978.
- [4] Decia R, Machado M, Herrera E. Abordaje renal percutáneo en decúbito dorsal. Una alternativa en Endourología. *Urología. Rev Soc Uruguaya Urol*. 1998;10:10-14.
- [5] Ibarlucea G, Gamarra M, Gallego JA, Pereira JG, Camargo I, Bernuy C. Litotricia renal percutánea. Evolución, indicaciones y metodología actual en nuestra Unidad de Litotricia. *Arch Esp Urol*. 2001;54(9):951-969.
- [6] Domenech A. Cirugía renal percutánea en decúbito dorsal intermedio: experiencia de dos años. *Rev Chil Urol*. 2001;66:48-52.
- [7] Di Biase G, Higa P T, Maroclo R R, De Melo F P F, Maroclo M V O, Colli W. Evaluation of the dorsal decubitus in percutaneous procedures. *Braz J Urol*. 2001;27:250-254.
- [8] Ng MT, Sun WH, Cheng CW, Chan ES. Supine position is safe and effective for percutaneous nephrolithotomy. *J Endourol*. 2004;18(5):469-474.
- [9] Lezrek M, Alami M, Kasmaoul EH, et al. The flank modified position for percutaneous nephrolithotomy: simultaneous ante grade and retrograde access to the upper urinary tract. *Eur Urol Suppl*. 2007;6(2)242:878.
- [10] Chedid Neto E A, Mitre A I, Mendes Gómez C, Arap M A, Srougi M, Percutaneous nephrolithotripsy with patient in a modified supine position. *J Urol*. 2007;178(1):165-168.
- [11] De Sio M, Autorino R, Damiano R, Giugliano F, Mordente S, Quarto G, D'Armiento M. PCNL in supine position: Why not? *Eur Urol Suppl*. 2007;6(2):242:877.
- [12] Manohar T, Jain P, Desai M. Supine percutaneous nephrolithotomy: effective approach to high-risk and morbidly obese patients. *J Endourol*. 2007;21(1):44-49.
- [13] Steele D, Marshall V. Percutaneous nephrolithotomy in supine position: A neglected approach? *J Endourol* 2007;21(12):1433-1437.
- [14] De Sio M, Autorino R, Quarto G, et al. Modified supine versus prone position in percutaneous nephrolithotomy for renal stones treatable with a single percutaneous access: A prospective randomized trial. *Eur Urol*. 2008;54(1):196-202.
- [15] Breda A. Editorial comment on: modified supine versus prone position in percutaneous nephrolithotomy for renal stones treatable with a single percutaneous access: A prospective randomized trial. *Eur Urol*. 2008;54(1):202-203.

- [16] Danuser H. Editorial comment on: Modified supine versus prone position in percutaneous nephrolithotomy for renal stones treatable with a single percutaneous access: A prospective randomized trial. *Eur Urol.* 2008;54(1):203.
- [17] Amon Sesmero JH, Del Valle González N, Conde Redondo C, Rodríguez Toves A, Cepeda Delgado M, Martínez-Sagarra Oveja JM. Comparación entre la posición de Valdivia y la posición prona en la nefrolitotomía percutánea (NLP) [Comparison between Valdivia position and prone position in percutaneous nephrolithotomy]. *Actas Urol Esp.* 2008;32(4):424-429.
- [18] Papatsoris A G, Zaman F, Panah A, Masood J, El-Husseiny T, Buchholz N, Simultaneous anterograde and retrograde endourologic access: "the Barts technique". *J Endourol.* 2008;22(12): 2665-2666.
- [19] Falahatkar S, Moghaddam AA, Salehi M, Nikpour S, Esmaili F, Khaki N. Complete supine percutaneous nephrolithotripsy comparison with the prone standard technique. *J Endourol.* 2008;22(11):2513-2517.
- [20] Clayman R F. Editorial comment on: Complete supine percutaneous nephrolithotripsy comparison with the prone standard technique. *J Endourol.* 2008;22(11):2513-2517.
- [21] de la Rosette JJ. Editorial comment on: Endoscopic combined intrarenal surgery in Galdakao-modified supine Valdivia position: a new standard for percutaneous nephrolithotomy? *Eur Urol.* 2008;54(6):1400-1401.
- [22] Strohmaier W L. Editorial comment on: Endoscopic combined intrarenal surgery in Galdakao-modified supine Valdivia position: a new standard for percutaneous nephrolithotomy? *Eur Urol.* 2008;54(6):1401.
- [23] Millán-Rodríguez F. Editorial comment on: Endoscopic combined intrarenal surgery in Galdakao-modified supine Valdivia position: a new standard for percutaneous nephrolithotomy? *Eur Urol.* 2008;54(6):1401-1402.
- [24] Hoznek A. Néphrolithotomie percutanée en décubitus dorsal: est-ce la voie de l'avenir? *Progres en Urologie-FMC.* 2008;18:22-26.
- [25] Seitz C. Editorial comment on: endoscopic combined intrarenal surgery in Galdakao-modified supine Valdivia position: a new standard for percutaneous nephrolithotomy? *Eur Urol.* 2008;54(6):1402-1403.
- [26] de la Rosette JJ, Tsakiris P, Ferrandino MN, Elsakka AM, Rioja J, Preminger GM. Beyond prone position in percutaneous nephrolithotomy: a comprehensive review. *Eur Urol.* 2008;54:1262-1269.
- [27] Autorino R, Giannarini G. Prone or supine: Is this the question? *Eur Urol.* 2008;54(6):1216-1218.
- [28] Ibarlucea G, Scoffone CM, Cracco CM, et al. Supine Valdivia and modified lithotomy position for simultaneous anterograde end retrograde endourological access. *BJU Int.* 2007;100:233-236.
- [29] Scoffone CM, Cracco CM, Cossu M, Grande S, Poggio M, Scarpa R M. Endoscopic combined intrarenal surgery in Galdakao-modified supine Valdivia position: a new standard for percutaneous nephrolithotomy? *Eur Urol.* 2008;54(6):1393-1403.

TO CITE THIS ARTICLE: Valdivia-Uria JG. Complete supine percutaneous nephrolithotripsy comparison with the prone standard technique: the time for change from prone to supine position has come! *UIJ.* 2009 Apr;2(2) doi:10.3834/uij.1944-5784.2009.04.09