

August 06-07, 2018
Prague, Czech Republic

Lee Seon Heui, J Univer Surg 2018, Volume: 6
DOI: 10.21767/2254-6758-C1-003

EFFECTIVENESS OF PERCUTANEOUS NEPHROLITHOTOMY, RETROGRADE INTRARENAL SURGERY, AND SHOCK WAVE LITHOTRIPSY FOR TREATMENT OF RENAL STONES: A SYSTEMATIC REVIEW AND METAANALYSIS

Lee Seon Heui

University of Gachon, South Korea

Urolithiasis is a major clinical and economic burden for healthcare systems. While EAU guideline of urolithiasis suggests various treatments as stone size and kinds, ESWL have held a large majority of the present state of urolithiasis treatment. So it needs to be conducted comparative effectiveness research of urolithiasis treatment for patients. A systematic review was performed comparing the efficacy of percutaneous nephrolithotomy (PCNL), retrograde intrarenal surgery (RIRS), and extracorporeal shockwave lithotripsy (SWL) in the treatment of renal stones. We searched MEDLINE, EMBASE, and Cochrane Central Register to retrieve relevant studies comparing intervention for urolithiasis. The primary analysis investigated efficacy of treatments; using index of stone free rate, total complication, retreatment procedure. 12 randomized controlled clinical trials and 27 observational studies met eligibility criteria. PCNL provided a significantly higher stone free rate (SFR) compared with RIRS (risk ratio [RR] 1.20, 95% confidence interval [CI]: 1.15-1.25), and ESWL (RR 0.69, 95% CI: 0.61-0.78). ESWL provided a lower total complication compared with PCNL (RR 0.28, 95% CI 0.18-0.45), whereas no statistical significant difference was found between ESWL and RIRS (RR 0.88, 95% CI: 0.67-1.15). ESWL required a significantly more retreatment procedure compared with RIRS (RR 5.75, 95% CI: 1.99-16.60), and PCNL (RR 11.92, 95% CI: 3.06-46.53). PCNL offers the highest SFR at the expense of higher total complication. ESWL offers lower total complication, but indicates lower SFR and more retreatment procedure. Rather than performing frequent ESWL, it needs to select proper treatment for urolithiasis with consideration of SFR and complication.

Biography

Lee has completed her PhD from Yonsei University of Nursing (Public Health Administration). She is an Associate Professor of Gachon University in the Department of Nursing Science. She has published several papers in reputed journals and has been active as an expert of evidence-based nursing and systematic review. She has worked for National Evidence-based Healthcare Collaboration Agency (NECA) as a Senior Director and a Research Fellow, and she wrote a book about evidence-based nursing. Her area of expertise is public health and health technology assessment.

sunarea87@gmail.com