EDITORIAL



Consultation of kidney stones: aspects of intracorporeal lithotripsy

Palle J. S. Osther^{1,2} · Marianne Brehmer³

Published online: 4 June 2021

© The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature 2021

Dear Editor,

Incidence and prevalence of kidney stones are steadily rising throughout the world [1]. The stone disease is often recurrent, and management represent a significant cost burden to society [2]. Due to the extreme diversity of the disease, a personalized stone approach (PSA) is mandatory to achieve the highest standard of care. In this perspective intracorporeal lithotripsy devices have proven to be key players. Technological developments in the field has been dramatic during recent years and has to a large extent 'driven' clinical activity; however, high level of evidence for different treatment approaches is still lacking. Owing to the fact that stone disease is so variable, randomized controlled trials are very difficult to establish in a clinically meaningful context. The surgical treatment itself is variable and hard to standardize. Furthermore, patients have their own idea about best treatment; and so do surgeons-so true randomization is nearly impossible [3]. Therefore, according to the framework of evidence based medicine (EBM) it is highly important from a scientific point of view to evaluate the balance between level of evidence, clinical expertise and patient's preferences and expectations in this demanding field. In this context sharing knowledge on clinical practices-tips and tricks-between practicing stone clinicians becomes especially important, and the most effective way that tips and tricks may be lifted up into an academic sphere is through international knowledge exchange. To embrace these important aspects of EBM in endoscopic stone management with particular focus on the rapidly growing area

- ² Department of Regional Health Research, University of Southern Denmark, Odense, Denmark
- ³ Division of Urology, Department of Clinical Sciences, Danderyd Hospital, Karolinska Institutet, Stockholm, Sweden

within technologies for intracorporeal lithotripsy, we invited 25 international experts in kidney stone management to participate in "Consultation on kidney stones: aspects of intracorporeal lithotripsy" [4]. The meeting took place at the Moltke's Palace in Copenhagen, Denmark, in September 2019. This was the second edition of Scandinavian endourology consultations (SEC); the first dealing with upper tract urothelial carcinoma (UTUC) was published in a series of papers in World Journal of Urology [4].

The experts were assigned different topics within the field. They prepared presentations according to the standards for a scoping review by scanning the literature using Pubmed, Embase, and Web of Science. The meeting extended over 2 days, where the first day was a closed meeting for the experts, where all presentations were presented, discussed, challenged, and adjusted accordingly. The second day was an open meeting, where the adjusted presentations were presented and discussed to an international audience.

Conclusion drawn from the meeting was that the evolution of different intracorporeal techniques has increased the possibilities of a personalized stone approach (PSA). The challenging task for the future is to address PSA from a scientifically sound EBM perspective, since ultimately use of technology and *tips and tricks* need to be evidence based. When asking questions about therapy we should try to avoid the non-scientific approaches, since these routinely lead to false positive conclusions about efficacy [5].

The meeting has resulted in two review papers on intracorporeal lithotripsy in percutaneous nephrolithotomy [6] and flexible ureteroscopy [7]; as well as six [8–13] original papers, published in this issue on the topic.

References

Osther PJS (2012) Epidemiology of kidney stones in the European Union. In: Talati J, Tiselius HG, Albala D, Ye Z (eds) Urolithiasis. Springer, London, pp 3–12. https://doi.org/10.1007/978-1-4471-4387-1_1

Palle J. S. Osther posther@health.sdu.dk

¹ Department of Urology, Urological Research Center, Vejle Hospital—a part of Lillebaelt Hospital, University Hospital of Southern Denmark, Vejle, Denmark

- Raheem OA, Khandwala YS, Sur RL, Ghani K, Densted JD (2017) Burden of urolithiasis: trends in prevalence, treatment, and costs. Eur Urol Focus 3(1):18–26. https://doi.org/10.1016/j.euf.2017.04. 001
- Roitberg B (2012) Tyranni of randomized controlled trials. Surg Neurol Int 3:154. https://doi.org/10.4103/2152-7806.104748
- Brehmer M, Osther P (2019) Consultation on UTUC Stockholm. World J Urol 37:2269–2270. https://doi.org/10.1007/ s00345-019-02932-2
- Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, Richardson WS (1996) Evidence based medicine: what it is and what it isn't. BMJ 312:71. https://doi.org/10.1136/bmj.312.7023.71
- Axelsson TA, Cracco C, Desai M et al (2020) Consultation on kidney stones, Copenhagen 2019: lithotripsy in percutaneous nephrolithotomy. World J Urol. https://doi.org/10.1007/ s00345-020-03383-w
- Lildal SK, Andreassen KH, Baard J et al (2020) Consultation on kidney stones, Copenhagen 2019: aspects of intracorporeal lithotripsy in flexible ureterorenoscopy. World J Urol. https://doi. org/10.1007/s00345-020-03481-9
- Panthier F, Doizi S, Lapouge P et al (2020) Comparison of the ablation rates, fissures and fragments produced with 150 μm and 272 μm laser fibers with superpulsed thulium fiber laser: an in vitro study. World J Urol. https://doi.org/10.1007/ s00345-020-03186-z

- Keller EX, De Coninck V, Doizi S et al (2020) Thulium fiber laser: ready to dust all urinary stone composition types? World J Urol. https://doi.org/10.1007/s00345-020-03217-9
- Williams JG, Goldsmith L, Moulton DE et al (2020) A temperature model for laser lithotripsy. World J Urol. https://doi.org/10. 1007/s00345-020-03357-y
- Zanetti SP, Lievore E, Fontana M et al (2020) Vacuum-assisted mini-percutaneous nephrolithotomy: a new perspective in fragments clearance and intrarenal pressure control. World J Urol. https://doi.org/10.1007/s00345-020-03318-5
- De Lorenzis E, Boeri L, Gallioli A et al (2020) Feasibility and relevance of urine culture during stone fragmentation in patients undergoing percutaneous nephrolithotomy and retrograde intrarenal surgery: a prospective study. World J Urol. https://doi.org/ 10.1007/s00345-020-03387-6
- Black KM, Aldoukhi AH, Teichman JMH et al (2020) Pulse modulation with Moses technology improves popcorn laser lithotripsy. World J Urol. https://doi.org/10.1007/s00345-020-03282-0

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.