


Comment on “Comparison of silodosin to tamsulosin for medical expulsive treatment of ureteral stones: a systematic review and meta-analysis”

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We read with great interest the last review on medical expulsive therapy for ureteral stone by Özsoy et al [1]. We congratulate the authors for their rigorous scientific method with which the study of meta-analysis was conducted. However, we think that controversial aspects remain. In fact since 2006 after several meta-analysis studies, the medical expulsive therapy was widely adopted and still remains the first treatment line to facilitate spontaneous passage and to reduce colic pain. The last European Association of Urology guidelines (EAU) confirm the use of α -blocker drugs as primary option treatment for ureteral stone. However, the last manuscript by Pickard et al. published in 2015 is not mentioned in the review, even if it is not within the inclusion criteria, and we think that various considerations must be made. Pickard showed the patients in treatment with nifedipine or tamsulosin had no benefit versus placebo for stone passage, analgesia and timing in passage [2]. The study was conducted with unquestionable methods and it had more patients than the meta-analysis data; nevertheless, the status of the excretory axes was not considered throughout the baseline assessment for patients. We have another hypothesis that can suggest relative benefits from the administration of α blockers and it is an “anatomic theory.” In fact, several studies on disposal of α receptors have shown that while in the ureter, the receptors disposition is the same for both genders, in the

bladder, there are substantial differences in the disposal receptor; particularly in women, there is a greater presence of α receptors at the level of the trigonus and in the peri-meatal areas. Starting from this concept, especially in juxta-vesical stones there should be differences in the percentage of spontaneous expulsion. However, in the major trials that have investigated the benefits of α blockers in the medical expulsive therapy are not reported significant differences between the genders. Another study that can suggest different mechanisms in stone expulsion is the one done by Shokeir et al. In this trial, the authors demonstrated that the administration of sildenafil citrate, increasing in the ureteric smooth musculature the levels of cAMP and cGMP, facilitates the stone expulsion [3]. In fact smooth muscle tone in the lower urinary tract is controlled by various adrenergic, cholinergic and non-adrenergic non-cholinergic neurotransmitters released from nerve terminals and endogenous factors from vascular endothelial sources. Kühn et al. confirmed the relaxing properties of inhibitors of PDE4 and PDE5 on isolated human ureteric smooth musculature and showed that these effects were due to an elevation in intracellular levels of cAMP or cGMP. Later, PDE5 was shown to play a central role in relaxant responses of lower urinary tract tissue mediated by nitric oxide (NO) and cGMP pathways. At the state of the art, we strongly believe that medical expulsive therapy has an important role on the management of ureteric stone; nevertheless, more studies evaluating the role of intracellular second messengers and with more stringent exclusion criteria are needed before solid conclusion can be drawn.

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Compliance with ethical standards

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