Extracorporeal shock wave therapy (ESWT) in treatment of chronic pelvic pain syndrome (CPPS): serum alterations of prostate specific antigen (PSA) during/after therapy

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Introduction

CPPS (NIH-NIDDK 3B) is accompanied by perineal, testicular, penile, bladder and back pain. Treatment options and success rates are limited. We performed ESWT for pain treatment in CPPS patients and followed PSA alterations.

Patients and methods

Patients with CPPS were included into the study. 6 ESWT sessions (each 2000 impulses, frequency 3 Hz, energy density 0.11 mJ/mm^2) were applicated within 2 weeks (perineal approach, supine position, Minilith SL1, Storz Medical AG, Kreuzlingen, Switzerland). The prostate region was targeted by integrated inline ultrasound. Follow up was performed 1, 4, 12 and 52. Pain/CPPS complaints were evaluated by statistically validated questionnaires. Serum PSA was obtained immediately before/after ESWT and at follow up.

Results

21 patients were treated in 126 ESWT treatments without complications/anaesthesia. 202 PSA-values (101 before/101 after ESWT) from 18 patients were evaluated. In 55.4% (n=56) PSA increased, in 39.6% (n=40) PSA decreased and in 5.0% (n=5) PSA showed no alteration. If PSA increased, the elevation was in 50.0% (n=28) </= 5%, in 21.4% (n=12) between >5% and </= 10%, in 16.1% (n=9) between >10% and </=20%, in 8.9% (n=5) between >20% and </= 50%, and 3.6% (n=2) > 50%. 94.4% showed mutually PSA in-/decrease. PSA course was not correlated to clinical response.

Discussion

Prostate ESWT showed no clinical side effects and no PSA relevant tissue lesion, minimal PSA alterations were within normal intraindividual range. ESWT in CPPS can be considered as safe treatment also in aspects of PSA alterations. PSA showed no correlation to clinical outcome.