

## CHRONIC SCROTAL PAIN SYNDROME (CSPS): THE WIDESPREAD USE OF ANTIBIOTICS IS NOT JUSTIFIED

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**Introduction & Objectives:** The chronic scrotal pain syndrome (CSPS) is defined as intermittent or constant discomfort or pain in the scrotum at least three months in duration that significantly interferes with the daily activities of the patient. Assuming an infectious aetiology antibiotics are a common therapeutic approach even though evidence is lacking. The aim of this study is to investigate how frequent bacteria are detectable in patients suffering from CSPS.

**Material & Methods:** From July 2005 to July 2007 we prospectively enrolled patients presenting with CSPS in our outpatient clinic. The standardized evaluation consisted of a detailed patient's history, physical examination and an ultrasound examination of scrotal contents. A blood and urinalysis, a Meares-Stamey four-glass test with combined urine cultures and additionally, PCR testing for Chlamydia trachomatis, Ureaplasma urealyticum and Neisseria gonorrhoeae were examined as well as a semen culture. We assessed the symptom severity with the chronic epididymitis symptom index (CESI) score according to Nickel et al (based on the NIH-CPSI). Patients with an ongoing acute epididymitis, a history of prostatitis or inguinal hernia were excluded.

**Results:** A total of 55 eligible men with CSPS were enrolled in the study. Their median age was 34 years (range 19 – 54). The median CESI score was 17 (range 4-26) and the average symptoms duration was 12 months (range 3 – 240). The majority of patients (n=39;71%) were seen by a general practitioner or an urologist before. Out of these, 25 patients (64%) were treated with antibiotics and 26 (67%) with NSAID, respectively. A significant bacterial colony count in at least one specimen was detected in 13 out of 55 patients (24%). In 7 out of 13 cases the bacteria were exclusively isolated from semen cultures. The predominantly detected micro-organism was an Alpha-haemolytic Streptococcus in 6 cases. Neither in urine cultures nor in the PCR Neisseria gonorrhoea or Chlamydia was detected.

**Conclusions:** Our data support former studies about CSPS being a syndrome with a high negative impact on the quality-of-life of afflicted patients. In our microbiological assessment we found no evidence for the widely held belief in CSPS representing a chronic bacterial infection. Furthermore, the rate of positive probes is likely to be overestimated due to the high risk of bacterial contamination in semen cultures. We conclude that the widespread use of antibiotic agents in the treatment of patients with CSPS seems not to be justified.

## EXTRACORPOREAL SHOCK WAVE THERAPY (ESWT) FOR TREATMENT OF CHRONIC PELVIC PAIN SYNDROME (CPPS): FIRST RESULTS OF A RANDOMISED PLACEBO-CONTROLLED DOUBLE-BLIND STUDY

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**Introduction & Objectives:** CPPS (Classification 3A/B according to NIH-NIDDK) is accompanied by many symptoms like voiding disorders and pain in various localisations. Quality of life of the affected men is often poor. Treatment options are very limited, an efficient therapy is still missing. We evaluated the effectiveness of ESWT for treatment of CPPS in a placebo-controlled study.

**Material & Methods:** 60 patients with typical CPPS complaints for at least 3 months and no inflammation signs in urine and seminal fluid were included into the study after randomisation. ESWT sessions (focused shock wave, 3000 impulses, 3 Hz, energy density 0.30 mJ/mm<sup>2</sup>) were performed once weekly for 4 weeks by perineal approach (Storz Duolith electromagnetic ESWT device, Storz Medical AG, Switzerland). For placebo treatment the transducer was modified by an integrated membrane which stopped the spreading of SW. Follow up (FU) was performed after 1, 4 and 12 weeks. Pain was evaluated by visual analog scale (VAS, 0-10), micturition by international prostate symptom score (IPSS, 0-35), specific complaints by NIH chronic prostatitis symptom index (NIH-CPSI, 0-43) and erectile function by the IIEF (international index of erectile function). Statistical analysis was done by t-test/Mann-Whitney rank sum test.

**Results:** All 60 men completed the treatment, 25 (11 verum, 14 placebo) could be evaluated till now due to complete FU (12 weeks). Duration of CPPS complaints was on average 7.7 months (3 – 24 ms). Treatments were well tolerated on an outpatient basis without anaesthesia or side effects. Duration of each treatment was 17 minutes. All parameters showed an improvement at the 12 weeks-FU in the verum group which could not be seen in the placebo group. The differences were statistically significant (IPSS p < 0.001, IIEF p = 0.005, CPSI p < 0.001, VAS p < 0.001).

**Conclusions:** This is the first placebo controlled study which proves the statistical significance of ESWT effects for CPPS patients. ESWT of the prostate region is a safe and effective treatment with remarkable release of symptoms. Quality of life could be improved markedly in particular due to pain release. The significant improvement of IIEF and IPSS is very interesting and will be further investigated. ESWT can be applied easily on outpatient basis also in private office, has no side effects and is very time and cost effective. The duration of the effects has to be evaluated by longer follow up but already now ESWT is almost the only therapy option for CPPS whose efficacy has been proven by placebo control.

## COMBINED SONO-ELECTROMAGNETIC THERAPY FOR TREATMENT OF REFRACTORY CHRONIC PELVIC PAIN SYNDROME: A NEW THERAPEUTIC POSSIBILITY?

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**Introduction & Objectives:** Treatment of chronic pelvic pain syndrome (CPPS) can be challenging for the patient and his treating physician once conventional therapies fail. Aim of this feasibility study was to evaluate the efficacy of a new, combined sono-electromagnetic treatment (Sonodyn® Medico Star) in men with treatment refractory CPPS.

**Material & Methods:** Twelve men with treatment refractory CPPS were treated with the new combined sono-electromagnetic therapy in a prospective study. Before entering the study all patients had undergone at least 1 four week cycle of antibiotic treatment with nonsteroidal anti-inflammatory drugs and  $\alpha$ -blockers. Treatment effect was assessed with the National Institutes of Health Chronic Prostatitis Symptom Index (NIH-CPSI) before and 6 weeks after the combined sono-electromagnetic treatment. In case of treatment response, also again at 12 weeks the treatment effect of a reduction of the NIH-CPSI score by 4 points and/or a reduction of the NIH-CPSI pain score below 8 were defined as an objective positive response. No further need for therapy or continuation of therapy to maintain the positive effect were considered a subjective positive response.

**Results:** Sono-electromagnetic treatment was subjectively and objectively successful after 6 weeks in 7/12 patients (58%) and 6/12 patients (50%), respectively and after 12 weeks in 3/7 patients (43%) and 5/7 patients (71%), respectively. Of the 7 patients treated for 12 weeks 2 continued therapy for its positive effects. One no longer required therapy and 2 stopped treatment despite positive objective improvement because of insufficient subjective improvement. In 1 patient therapy increased discomfort. No other side effects were observed.

**Conclusions:** Sono-electromagnetic treatment for 6 to 12 weeks subjectively and objectively improved pain and discomfort in over 40% of our patients with treatment refractory CPPS with no side effects. Provided results will be sustained over a longer period of time, a randomized, double-blind, placebo-controlled study is warranted.

## PERCUTANEOUS PERINEAL DRAINAGE OF PROSTATIC ABSCESES USING THREE-DIMENSIONAL ULTRASOUND GUIDANCE

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**Introduction & Objectives:** Three-dimensional (3-D) transrectal ultrasound can be used to visualize the prostate in three planes (coronal, sagittal and horizontal) simultaneously, thus permitting evaluation and precise placement of a needle in any intraprostatic structure. The present study was performed to evaluate feasibility and effectiveness of 3-D ultrasound guided transperineal puncture and drainage of prostatic abscesses.

**Material & Methods:** Between 1985 and 2005 a total of 24 patients with prostatic abscesses were evaluated and treated in our hospital. Mean age was 52 years. Conservative antibiotic therapy was performed in 3 patients, transurethral unroofing in 3, perineal incision in 7, transrectal ultrasound guided (TRUS) puncture and drainage in 2 and perineal puncture and drainage using 3D transurethral ultrasound guidance (3D TRUS) in 9 patients.

**Results:** Urine cultures were positive for E. coli in 13 patients while 7 patients had mixed flora and 4 negative urine cultures. Results from abscess cultures were available for all patients. 13 had E. coli, 8 mixed flora, 2 cultures were sterile and in 1 anaerobes were found. Transperineal puncture was performed under general anesthesia. Besides antibiotic therapy, a nephrostomy tube was left in place in all cases treated by means of 3-D ultrasound guided puncture for a mean period of 3 days to drain the abscesses. All 9 patients were treated effectively without additional therapy or complications, while in 3 of the 15 patients treated by other surgical techniques reoperations had to be performed.

**Conclusions:** 3-D ultrasound guided transperineal puncture is a minimally invasive and effective technique for treatment of prostatic abscesses.