

# Prevalence of changes in prostate secretion in men with chronic pelvic pain syndrome

## Hypothesis / aims of study

Chronic pelvic pain syndrome (CPPS) in men is often mistakenly associated with prostate inflammation - prostatitis, which leads to unwarranted prescription of anti-inflammatory and antibacterial therapy. However, current evidence points to the complex multifactorial nature of CPPS, where pain syndrome may be associated with disorders of neurogenic, muscular or visceral origin, not only with prostate pathology. The aim of this study is to demonstrate that changes in prostate secretion are not the only or reliable criteria for confirming prostate inflammation in patients with CPPS, and that their ill-considered use in clinical practice leads to overdiagnosis and unnecessary treatment.

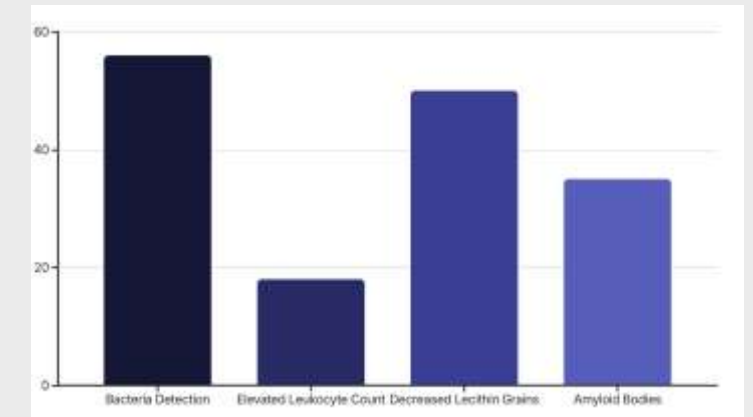
## Study design, materials and methods

The study included 40 men aged 25 to 55 years with diagnosed CPPS of more than 12 months duration. Patients were selected on the basis of anamnesis, medical record data and clinical examination results. - All patients in the main group had previously received antibiotic therapy.

Control group: 20 healthy men without signs of pelvic pain and prostate pathology. Completion of the NIH-CPSI questionnaire. Assessment of the presence of associated symptoms such as IBS, migraine, interstitial cystitis, fibromyalgia, GERD, low back pain and other complex regional pain syndromes by questionnaire and clinical examination. Collection of prostate secretion by prostate massage. Microbiological examination, microscopic analysis of prostate secretion.

## Results

1. 60% of patients in the main group had an increased number of leukocytes and bacteria in the prostate secretion, which is significantly higher than in the control group ( $p < 0.001$ ).
2. The most common changes were: - Detection of bacteria in prostate secretion according to microbiological analysis - 56% - Elevated white blood cell count in prostate secretion ( $> 10$  in the field of view) - 18% of cases. - Decreased number of lecithin grains - 50% of cases. - Presence of amyloid bodies - 35% of cases.
3. Patients with a disease duration of more than 3 years had a higher rate of detection of elevated leucocyte and bacterial counts than patients with shorter duration of symptoms ( $p = 0.02$ ).
4. Changes in prostate secretion were observed in 68% of patients with comorbid symptoms such as IBS, migraine, interstitial cystitis, fibromyalgia, GERD, low back pain and other complex regional pain syndromes, but these changes did not always correlate with the severity of pelvic pain.



## Concluding message

The obtained data support the hypothesis that long-term CPPS is accompanied by the detection of an increased number of leukocytes and bacteria in the prostate secretion. These changes may be associated with both inflammatory processes and changes in the microbiome in patients with CPPS. It is important to remember that the detection of elevated leucocyte and bacterial counts in prostate secretion more often reflects a change in the microbiome than pathological processes in the prostate gland itself. This emphasises the need to be cautious in interpreting the results of the test and to limit the use of antibiotics.