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Prostatitis and its Management

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Abstract

Classification of Prostatitis Syndrome: The diagnosis of symptomatic prostatitis refers to a variety of entities which may be related to infection and inflammation of the prostate gland (bacterial prostatitis), inflammatory and non-inflammatory chronic pelvic pain syndrome, and pelvic pain not related to prostatitis.

Clinical Diagnostics: In acute bacterial prostatitis, clinical symptoms are typical. Infection is defined by midstream urine analysis. In CBP, the key point of diagnosis is the use of a 2-glass test, with or without additional ejaculate analysis. The same test is used to define or exclude inflammation and / or infection in CPPS. In CPPS, symptomatic evaluation is based on a validated NIH-CPSI questionnaire. Additional phenotyping may be helpful in characterizing the predominant symptoms.

Therapy: Antibiotics surely play a fundamental role in bacterial prostatitis therapy. They should be introduced empirically in acute prostatitis with a high intravenous dose and always guided by resistance determination in chronic cases. Thanks to their pharmacokinetic properties and antimicrobial spectrum, fluoroquinolones remain the most highly recommended antibiotics. The most appropriate treatment for chronic pelvic pain syndrome is a multimodal approach based on phenotyping including alpha-blockers, antibiotics, anti-inflammatory medication, hormonal therapy, phytotherapy, antispasmodics and non-drug-related strategies, such as psychotherapy and attempts to improve relaxation of the pelvic floor. The response can be evaluated by a drop in symptoms, using the scoring of the NIH-CPSI.

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1. Introduction

Diagnosis of prostatitis refers to a variety of inflammatory and non-inflammatory, symptomatic and non-symptomatic entities often not affecting the prostate gland. Prostatitis syndrome has been classified in a consensus process as infectious disease (acute and chronic), chronic pelvic pain syndrome (CPPS) and asymptomatic prostatitis [1] (Table 1). Prostatitis-like symptoms, especially pelvic pain, occur with

a prevalence of about 8% [2], with severe symptoms especially in CPPS. The National Institutes of Health Chronic Prostatitis Syndrome Index (NIH-CPSI) represents worldwide the validated assessment tool for evaluating prostatitis-like symptoms [3,4]. Only Category IV prostatitis is asymptomatic with the diagnosis normally resulting from histological evaluation by biopsy [4].

In clinical practice, 90 percent of outpatients suffer from CPPS, inflammatory or non-inflammatory disease [5,6].

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Table 1 – NIH classification system for prostatitis syndromes [1]

Category	Nomenclature
I	Acute bacterial prostatitis
II	Chronic bacterial prostatitis
III	Chronic pelvic pain syndrome (CPPS)
III A	Inflammatory
III B	Non-inflammatory
IV	Asymptomatic prostatitis

Management of pelvic pain is a major challenge for the urologist [5]. Men with proven bacterial prostatitis need meticulous diagnostic management and therapy, some of them have to be hospitalized [6–10].

This review covers accepted aspects of diagnostic procedures and therapeutic attempts in men suffering from symptomatic prostatitis and CPPS (Categories I to III).

2. Diagnostic Management

2.1. Acute Bacterial Prostatitis (NIH I)

2.1.1. Medical history and physical examination

Careful medical history (e.g. physical examination) investigating presence of fever and voiding dysfunction is fundamental. It should include scrotal evaluation and a gentle digital rectal examination without prostate massage, which is not recommended due to the risk of bacterial dissemination. The prostate is usually described as tender and swollen [6–9].

2.1.2. Laboratory analysis

Diagnosis is based on microscopic analysis of a midstream urine specimen with evidence of leucocytes and confirmed

Table 2 – Common pathogens in bacterial prostatitis (NIH I, II) [6,11]

Etiologically recognized pathogens	Microorganisms of debatable significance	Fastidious microorganisms
E. coli	Staphylococci	M. tuberculosis
Klebsiella sp.	Streptococci	Candida sp.
Proteus mirabilis	Corynebacterium sp.	
Enterococcus faecalis	C. trachomatis	
P. aeruginosa	U. urealyticum	
	M. hominis	

by a microbiological culture, which is mandatory and the only laboratory examination required [7,10,11]. Enterobacteriaceae, especially E. coli, are most common [6,7,11]. Prostatic specific antigen is often increased and may be used diagnostically [7,9].

2.1.3. Imaging

Ultrasound evaluation of the residual urine is indicated to exclude urinary retention. TRUS may reveal intraprostatic abscesses, which usually appears as a hypoechogenic walled-off collection of fluid [7,9,11,12].

2.2. Chronic Bacterial Prostatitis (NIH II)

2.2.1. Medical history and physical examination

A history of recurrent urinary tract infections with the same pathogenic agent is typical [7]. The main symptoms are pelvic pain and LUTS [7,11].

2.2.2. Laboratory analysis

Bacteriological localization cultures are fundamental for the diagnosis of chronic bacterial prostatitis [7,11]. In the past,

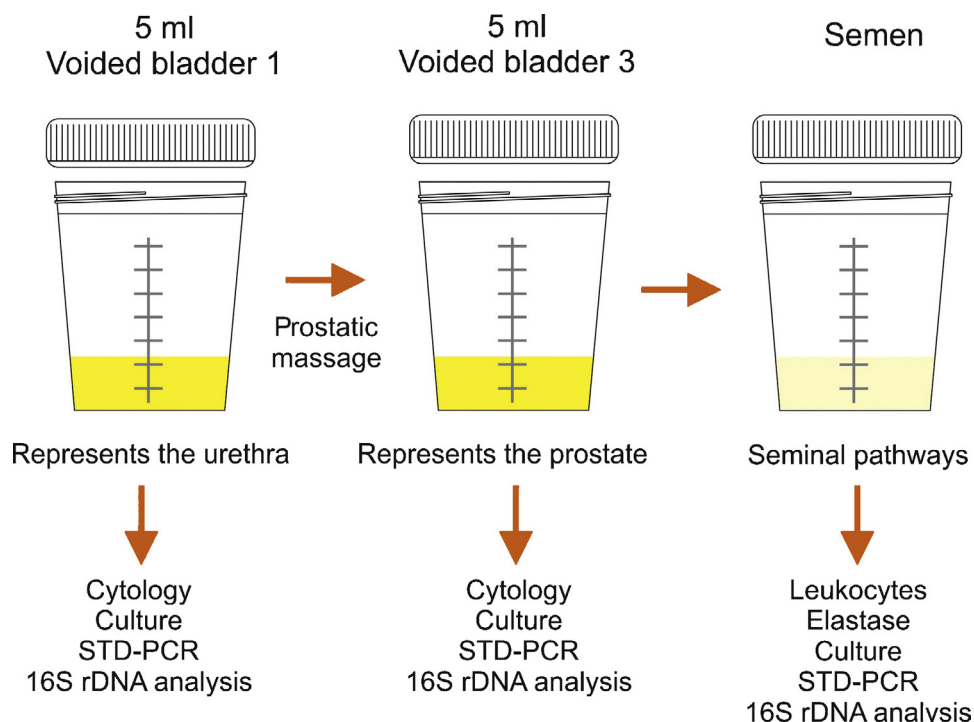


Fig. 1 – Microbiological diagnostic 2-glass test – Giessen procedure.

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