Diagnosing and treating prostatitis

Etiology (treatment options)

The etiology of prostatitis is currently unclear; its formation/development can be attributed to many factors:
• infection (microcolonies, or biofilms on the surface of prostate stones),
• immunopathology diseases,
• stress, for which we mean the increased tone of the muscles in/of the pelvis and the increased sensitivity of the mechanoreceptors in the muscle fascia
• hormonal factors
Most frequently, it mutates in an ascending way, when pathogens primarily settle in the lower part of the urethra, and then, due to various factors, move up and enter the prostate. With regards to colonisation, sexual contact plays the most habitual role. In such cases, firstly the vagina becomes colonised or infected with the bacteria and then during sexual contact, pathogens can temporarily colonise the male uretha. After this, depending on the virulence of the bacteria and the body's immune system, prostatitis can develop.
Lately, increased research into the disease from an immunological perspective has revealed the possibility of an autoimmune origin.
In addition to this, there is a bigger emphasis on existing urinary dysfunction, the background for which is based on :
• the abnormally increased closing pressure of the external sphincter
• the incomplete relaxation of the bladder,
• the increased intraprostatic pressure causing urine reflux to develop in the prostateducts and the acinars.
In developing prostatitis, neither the haematogenous nor the lymphogenous routes have any real influence.

SYMPTOMS

The disease's most characteristic symptoms are variable intensity pains confined to different areas, and lower urinary tract symptoms (LUTS).
According to research these are the most common areas for the pain to occur:

- prostate/perinaeum: 46%,
- scrotum or/and testicles: 39%,
- penis: 6%,
- bladder: 6%,
- sacrum: 2%.

From the lower urinary tract symptoms:

- frequency of urination ,
- heavier, thinner stream when urinating
- painful urination most of the time.

From the length of the symptoms we can differentiate between two types of imflammation; acute and chronic (3 months).

Treatment
Antibiotic treatment is needed for acute and chronic bacterial prostatitis, and also for imflammatory pelvic pain syndrome. It is important that antibiotics reach the therapy level in the stromal cells, in the interstitium and in the secretium.

ACUTE BACTERIAL PROSTATITIS

During the first stage, we can consider using parenteral high doses aminoglycosides, expanded spectrum penicillin derivatives and third generation cephalosporins until the imflammation symptoms ease.
For ongoing therapy and in moderate cases, alternatively fluoroquinolone antibiotics can be used (2×200 mg ofloxacin, 2×500 mg ciprofloxacin, 1×500 mg levofloxacin).
These preparations have a high level of tolerability and few side effects, which is important as the treatment has to be continued for at least 4 weeks after the acute sympotms have stopped. Finishing a

course too early could lead to the development of chronic bacterial prostatitis. Anti-inflammatory medication, antipyretic tablets and pain-killer tablets all help to ease the patients' symptoms.

CHRONIC BACTERIAL PROSTATITIS

Of the available antibiotics, the most common ones are the fluoroquinolones (2×200 mg ofloxacin, 2×500 mg ciprofloxacin, 1×5000 mg levofloxacin). Depending on the patient's subjective and objective improvement, the treatment should be continued for 4-6 weeks. Only long term treatment can destroy the bacteria settled in the so called biofilm or bacteria grouped in colonies on the surface of the prostate stones.
The most commmon reason for relapse is the early termination of treatment.

IMFLAMMATORY CHRONIC PELVIC PAIN SYNDROME
Because of the wide range and often featureless symptoms, patients are initially examined by a gastroenterologist (a consultant who specialises in the intestine and the pancreas).
Almost always, resulting tests are negative. In other cases, patients go to the internal medicine department or to the rheumatology unit. The symptoms mostly appear one by one and they are not always obvious.

Currently, a 2 week period of antibiotic treatment is recommended (primarily fluoroquinolones), which should be continued for another 2-4 weeks if the control examination has confirmed that the patient's condition improved.
If the disease does not react to antibiotic treatment, there is no point in prescribing any more tablets.
As well as antibiotics and treatment for the decreased urinary flow (<18 ml/s), alpha blockers and rye pollen extracts are also used to treat the disease. They prolong the symptom free period and potential recurrences by reducing the spastic pressure of the urethra and the intraprostatic reflux.
Rye pollen extracts do not just reduce the spastic dysfunction, but throughout the inhibition of the biosynthesis, they encourage the prostaglandin and leukotriene (inflammatory mediators) to reduce congestion while also having an anti-inflammatory effect.
It is recommended that both alpha blockers and rye pollen extracts are taken for 6-8 months.

As a complimentary therapy to easy pain and discomfort, non-steroid anti-inflammatories (ibuprofen 600 mg/day, diclofenacum calcium 100 mg/day, piroxicamum 20 mg/day) can be taken. And to reduce the urea and xanthin levels in the prostate, acini xanthin oxide paralysers (allopurinol 600 mg/day starter, then 300 mg/day to maintainer) can also be taken.
Massage (only in the case of mucous retention where the efficiency is proven), as well as zinc and other multivitamins can help to stop the symptoms.
In the case of irritative urinary symptoms, parasympatholytics (oxybutinin 15 mg/day) might be needed.
Thermotherapy (microwave-energy, bactericidal effect) should only be used, after careful consideration, in cases when the disease did not react to antibiotics or if the disease is has been present for a year.
In the case of a diagnosed bladder stenosis, transurethral incision of the prostate (TUIP) can be considered.

NON- INFLAMMATORY PELVIC PAIN SYNDROME
The origins of the disease can be attributed to the increased tone of the muscles in the bladder neck and in the pelvic floor. This is why alpha blockers, rye pollen extracts (6-8 months) and striated muscle relaxants have become ever more common to treat the disease (carisoprodol chlorzoxazone).