

# Bladder Pain Syndrome

The term Bladder Pain Syndrome has been adapted by the International Association for the Study of Pain (IASP), The European Association of Urology and ESSIC, instead of the terms **interstitial cystitis or painful bladder syndrome**.

## Definition

IASP defines Bladder pain syndrome as: the occurrence of persistent or recurrent pain perceived in the urinary bladder region, accompanied by at least one other symptom, such as pain worsening with bladder filling and day-time and/or night-time urinary frequency. There is no proven infection or other obvious local pathology. Bladder pain syndrome is often associated with negative cognitive, behavioral, sexual, or emotional consequences as well as with symptoms suggestive of lower urinary tract and sexual dysfunction.

The important points to take from this definition are:

- The pain has to be felt within the bladder region and associated with other urinary symptoms to support the diagnosis.
- Despite the sufferer having a sensation of a bladder infection, those with BPS do not have an infection (or any other local pathology). Inflammatory changes may be found within the bladder; in many cases these are probably a response by the nerves rather than the cause.
- Like all those who suffer with chronic and persistent pain, those with BPS are likely to become tearful and distressed; they may develop activities that are unhelpful. The definition recognises these difficulties to encourage carers to evaluate these issues and to encourage a team support approach.

## Epidemiology

The prevalence of BPS is not clear, possibly as a result of different definitions having been used over the years. The EAU review places the number of sufferers as being between 0.06% and 30% of the population. Women are 10 times more likely to get this than men, though this may partly be due to the men being given different labels such as prostate pain syndrome as opposed to BPS.

## Clinical Features, natural history and prognosis

The primary feature is of a constant sensation of needing to pass urine (urinary urge), similar to the sensation of having a bladder infection. However, in all cases there is no evidence of an actual infection for the majority of the time. This sensation is often described as being painful and holding on to the urine may increase the pain. As a result the sufferer often tries to urinate many times during the day (urinary frequency), often with limited benefit. As well as this local pain, pain may be felt in other areas of the body and there is an association with the vulvar pain syndromes, irritable bowel syndrome and fibromyalgia. Pelvic floor and other local muscle pains, with muscle



tenderness reproducing the symptoms, are also common. These pains are thought to have a similar mechanism involving the central nervous system.

As well as pain there is an association with endocrine and autoimmune disorders.

Those suffering with BPS often find it difficult to exercise and may even spend long hours in bed. This results in physical weakness and disability. As to be expected, this condition can result in distress and depression as well as negative thoughts. The psychological symptoms are usually as a result of the suffering and BPS is not considered to be a psychological condition.

The long term prognosis is not clear. Sometimes the symptoms resolve spontaneously, or with conservative treatment. Fluctuation in symptoms is common. Severe cases are less common and need specialist care and support.

## **Etiology and Pathophysiology**

The cause for BPS is not known. There may be an environmental or genetic predisposition. The first episode may be associated with an acute urinary tract infection, local trauma or follow an acute period of stress. Such events may trigger the neuro inflammatory, immune and endocrine phenomena that are associated with the condition. The inflammatory, chemical and structural changes found in the bladder of some patients are probably due to chemicals released from the nerves as opposed to local conditions. Changes throughout the nervous system, probably from the bladder nerves right up to the brain, are responsible for this and the sensation of urge when the bladder is empty. They may also magnify normal sensations to produce pain.

The changes within the nervous system may also change the way that organs work; for instance, such changes may produce bladder spasm, constipation or diarrhoea and may result in muscle (pelvic, abdominal and back) spasm and tenderness. It is because the changes are throughout the nervous system that sufferers can develop symptoms in other parts of the body, such as the autoimmune dry eye syndrome.

## **Diagnosis/Differential Diagnosis**

Diagnosis is by exclusion of other conditions. The EAU and ESSIC professional documents cover this in detail. A thorough urological history, examination and urine analysis is essential. The ESSIC criteria supported by the EAU would recommend looking into the bladder under general anaesthesia (cystoscopy), filling the bladder with fluid during the cystoscopy (hydrodistension) and taking biopsies, though not all guidelines would be this stringent. This more thorough examination enables the clinician to classify the condition as to whether there are areas with a tendency to bleed (glomerulations) or ulcers (Hunner's Ulcers). The implications of these differences are not clear and indeed it has been suggested that normal people without BPS may develop glomerulations with hydrodistension.

## **Therapy can include: Pain management psychology and physiotherapy.**

Bladder Pain Syndrome is associated with social isolation, difficulty in maintaining work and relationships. Travel and going out become problematic. Sexual intimacy is often painful and stressful for those concerned. Sleep is poor and disrupted. Sufferers develop negative thoughts that may escalate to cause anxiety and fear. Depression is common. Physical activity is difficult



and patients may become disabled and take to their bed as a result.

All patients need to be assessed for these psychological and activity related problems as the outcome (prognosis) is closely related to these issues and appropriate support by a team that includes pain management psychology and physiotherapy is essential.

### **Diet and alternative therapy**

Diet restrictions, acupuncture, hypnosis and transcutaneous electrical nerve (TNS or TENS) stimulation have a limited evidence base but are frequently employed as low risk and low cost treatments that help some. Bladder training may be invaluable for certain patients.

### **Medication**

There are a wide range of medications that may be tried, with variable amounts of supporting evidence. An expert may be required to help the patient understand the advantages and disadvantages. Some of these drugs are provided by a urologist, others from a pain clinic.

Drugs that are often suggested include: Hydroxyzine (reduces inflammatory cell activation), amitriptyline (neuropathic analgesic), pentosan polysulphate (aimed at lining the bladder), cimetidine (antihistamine), gabapentin or pregabalin (neuropathic analgesics).

Strong analgesics should be used with caution and only with appropriate guidance from skilled specialists. Antibiotics rarely have a role.

### **Bladder instillations (intravesical treatment)**

Placing drugs within the bladder produces higher concentrations of those medications at that site. These drugs may reduce symptoms in certain cases.

### **Hydrodistension**

Filling the bladder to stretch it has been used as a treatment for many years. However, the evidence to support hydrodistension as a therapy is limited.

### **Neuromodulation**

This is a treatment where wires are inserted into the body in a similar way to a pace maker for the heart. It is a specialised treatment that is gaining greater support with time. It is a big undertaking and appropriate support (including psychological) and long term management are required. External stimulation of the tibial nerve is also undergoing trials.

### **Surgery**

Surgery on the bladder is only appropriate for the most severe of cases and expert opinion is necessary prior to such an undertaking.

## References

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## Internet Resources

<http://www.uroweb.org/guidelines/>

<http://www.essic.eu/index.html>

