

## Introduction

Bladder pain syndrome/interstitial cystitis (BPS/IC) is a heterogeneous disorder with considerable variation in management worldwide due to divergent guideline recommendations, leading to delayed diagnosis.

Investigating the prevalence of different BPS phenotypes and the outcomes of phenotype-directed management would enable optimisation and standardisation of therapy, and inform future research efforts.

We describe the management of a contemporary cohort of patients with BPS/IC in the UK.

## What is Bladder Pain Syndrome/ Interstitial Cystitis?

The broad definition that all guidelines (EAU, ESSIC, AUA, and ICS) agree on includes:

- Pain, pressure or discomfort**
- Felt in the **pelvis/bladder**
- Associated with **at least one urinary symptom** (frequency, urgency, nocturia)
- Lasting **at least 6 weeks**
- Absence of other diseases** that could cause pain (e.g. infection)

BPS is a severely debilitating and chronic disorder, which has a significant impact on the quality of life of its sufferers. It is more common than one may think: a Large US study demonstrated prevalence rates of 2.3- 6.5% (1). Despite this, it is of unknown aetiology and there is a lack of consensus on the exact definition of the condition, as well as how to best investigate or treat it.

## Diagnosing/ Investigating BPS

It is widely agreed that the diagnosis of BPS can be made on a clinical basis.

**No invasive investigations** are required to be able to make a diagnosis of BPS or initiate treatment (2).

All guidelines however recommend that a thorough history and examination be undertaken, and investigations performed to **exclude other specific diseases** that may cause pelvic pain.

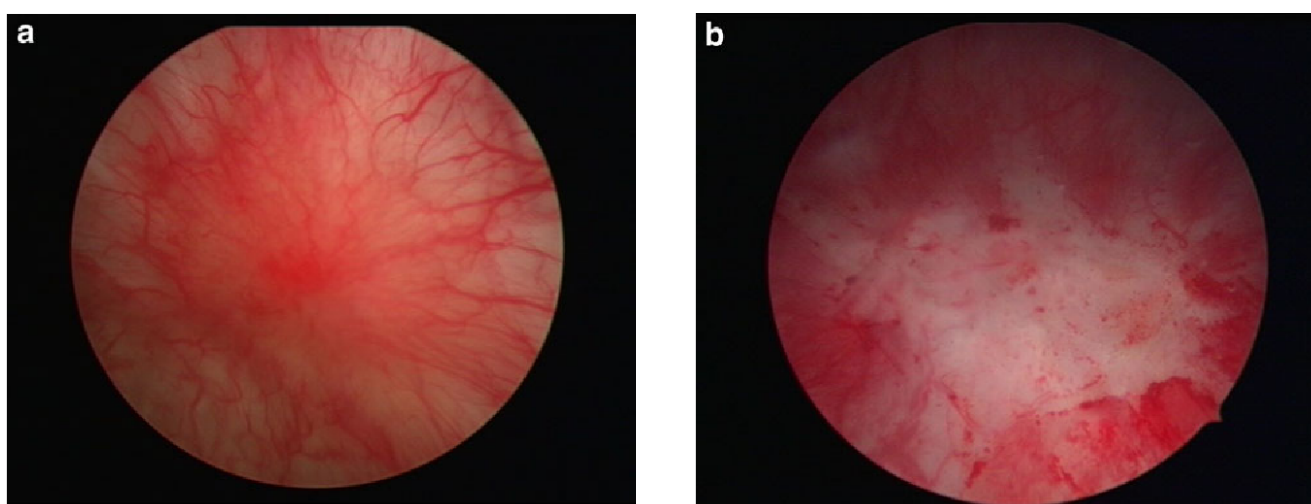
The more invasive methods of investigation involve **cystoscopy**:  
 To **exclude** other underlying pathologies that may mimic BPS  
 To enable assessment of bladder **capacity**  
 To identify the presence of stigmata of BPS, including **Hunner's lesions**  
 To allow for **hydrodistension** to be performed  
 For **biopsy** to be undertaken.

## Different Subtypes of BPS

Hunner's lesions vs non-Hunner's lesions.

Hunner's lesions are "**circumscribed, reddened mucosal areas with small vessels radiating towards a central scar**, with a fibrin deposit or coagulum attached to this area. This site **ruptures with increasing bladder distension**, with **petechial oozing of blood** from the lesion and the mucosal margins in a waterfall manner".

Their presence has been associated with an **increased severity of symptoms**, and a **smaller bladder capacity**, and it has been proposed that their identification may help to **direct treatment strategies** (2, 4, 5).



## Knowledge Gaps

Unknown aetiology and lack of consensus on the exact definition of the condition, as well as how to best investigate or treat it.

Proportion of Hunner vs non-Hunner patients.

Outcomes of treatment targeted to Hunner's lesions.

## Aims

To describe the demographics of patients presenting with BPS/IC.

To determine the positive yield of pelvic imaging in patients with symptoms of BPS/IC.

To determine the proportion of patients with Hunner vs non Hunner disease.

To assess the response to treatment directed at Hunner's lesions (Holmium laser ablation).

To enable the optimisation and standardisation of therapy, and inform future research efforts.

## Patients and Methods

We performed a retrospective analysis of all patients with BPS/IC from Jan 2015 - Nov 2018.

Data was collected with regards to demographic details, investigation and treatments trialed.

Outcomes of patients who underwent phenotype-directed management with laser ablation to Hunner's lesions were collected using the Global Response Assessment (GRA) tool.

-3 markedly worse + 3 markedly improved

## Results

163 patients (mean age of 43 years (20 – 85)) were included.

78% were female.

Patients had experienced symptoms for an average of 6 years (1 – 30).

83% of patients had pelvic imaging – 44% ultrasound, 42% MRI and 14% CT.

Imaging was abnormal in 5 patients (4%).

14% had Hunner's lesions.

55% experienced moderately/markedly improvement in symptoms after laser ablation with a mean duration of effect of 10 months.

	N (%)	Mean bladder capacity under GA (ml)	ESSIC C on histopathology, N (%)	Markedly/moderately improved at 3 months, N (%)	Mean duration of efficacy (months)	Number of patients having repeat treatments, N (%)
ESSIC 1	91 (59%)	709 (100-1800)	5 (5%)			
ESSIC 2	41 (26%)	607 (180-1000)	10 (24%)			
ESSIC 3 (Hunner's lesions)	22 (14%)	373 (175-650)	17 (77%)			
Laser ablation of Hunner's lesions	22 (100%)			12 (55%)	10 (3-36)	6 (27%)

Chart 1. ESSIC findings and outcomes of laser ablation.

## Conclusion

BPS/IC is 4 times more common in women than men.

The presence of Hunner's lesions in patients with BPS/IC is not uncommon.

Pelvic imaging rarely identifies any cause for pain, and so cystoscopy under anaesthesia is essential for accurate phenotyping.

Phenotype-directed management with Holmium laser ablation to Hunner's lesions has good short-term efficacy in improving pain, but patients often require repeat treatments.

## References

- Konkle KS, Berry SH, Elliott MN et al. Comparison of an interstitial cystitis/bladder pain syndrome clinical cohort with symptomatic community women from the RAND Interstitial Cystitis Epidemiology study. J Urol 2012; 187: 508–12