Bladder pain syndrome interstitial cystitis

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Bladder pain syndrome (BPS) is a chronic condition char acterised by pelvic pain or pressure that is perceived to be originating from the bladder, accompanied by one or more urinary symptoms, including frequency , urgency and nocturia. The diagnosis is made once other confusable diseases that Guy Hunner , 1868–1957, American surgeon, first described the characteristic inflammatory lesions of the bladder in 1915. interstitial cystitis (IC) is often used interchangeably with BPS but represents a distinctive bladder organ-specific phenotype - with characteristic cystoscopic and histopa thological features as opposed to the systemic phenotype of BPS. The precise aetiology of BPS/IC is unknown. Clinical features - Patients present with disabling bladder or pelvic pain, urinary urgency and severe urinary frequency and nocturia. Those with BPS may have other associated chronic medical condi - tions (e.g. fibromyalgia, irritable bowel syndrome, migraines). Investigation Urine analysis and culture, testing for sexually transmitted infections and urine cytology should be performed to exclude an infective or malignant cause for symptoms. Pelvic imaging should be performed if an alternative diagnosis, such as endo - metriosis, is suspected. Cystoscopy should be performed to exclude other pathology and also to aid accurate phenotyping of BPS (bladder capacity , presence of Hunner lesions). The aim of phenotyping is to separate those with clear bladder pathol - ogy (small capacity , Hunner lesions, chronic inflammation) from those with anatomically normal bladders as treatment - options vary . In those with Hunner lesions, bladder biopsy shows a chronic pancystitis, often with marked infiltra tion with lymphocytes and macrophages and mast cell infiltration. The ‘INPUT’ classification system allows patients’ symptoms to be described in five di ff erent clinical domains in order to guide multimodal therapy: Infection, Neurological/systemic, Psychosocial, Ulcers and Tenderness of muscles. The aim of the evaluation is to assess the relative contribution of each of these factors to the patient’s symptoms. Treatment Treatment of BPS/IC consists of conservative, pharmacolog - ical, intravesical and surgical options. Conservative Patient education about the chronicity of the condition, behavioural modification (timed voiding, bladder training), stress reduction, dietary alteration (avoidance of ca ff eine and spicy and acidic foods) and physical therapy should be the initial management for all patients. Pharmacological Several pharmacological therapies have been studied for BPS/IC, all with variable e ffi cacy . Neuropathic analgesics (e.g. amitriptyline, pregabalin) are used for those with a significant pain component, whereas antimuscarinics and β -agonists 3 are used for frequency , nocturia and urgency symptoms. Oral pentosan polysulphate (Elmiron), a glycosaminoglycan (GAG) - layer replacement treatment, has demonstrated e ffi cacy in pain and urinary symptoms but recent reports of ophthalmic adverse events with long-term exposure may limit its use. Evidence for other oral therapies (e.g. antihistamines and immunosuppressants) is mixed. Direct instillation of GAG layer replacement therapies are thought to repair the defective GAG layer, which may be part of the pathophysiology of BPS/IC. Although the evidence base is weak, they are widely used

with satisfactory outcomes in some patients without the side e ff ects seen with oral therapies. Intravesical ‘cocktails’ with combinations of alkalinised local anaesthetic, steroid and GAG layer therapies may be useful for acute flares. Surgical Several surgical options have been studied. For those with Hunner lesions, fulguration or laser to these lesions can be beneficial. Cystodistension as a treatment has variable evidence for success. Minimally invasive treatment with intravesical BTX-A or SNS should be o ff ered after the above measures have failed. If these options fail to improve symptoms major surgical reconstruction can be considered in selected cases. This is more suitable for those with clear evidence of bladder pathology (small capacity , fibrotic, ulcerated bladder). The aim is to increase the capacity of the bladder or divert the urinary stream, with options including bladder augmentation cystoplasty , cystoplasty with or without subtrigonal resection or urinary diversion with or without cystectomy . It is generally thought that cystectomy with orthotopic bladder reconstruc tion or ileal conduit urinary diversion is the best option as any form of bladder preservation risks ongoing pain in the remnant bladder segment with requirement for secondar y cystectomy in up to 65%.

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