



PS / LPS induced bladder hyperactivity

A MODEL FOR INTERSTITIAL CYSTITIS / BLADDER PAINFUL SYNDROME (IC/BPS)

Model

Cystometry in anesthetized animals after PS / LPS treatment. Intravesical instillation of protamine sulfate (PS) and lipopolysaccharide (LPS) in rodents produces bladder inflammation and bladder hyperreflexia mimicking some of the pathological features of interstitial cystitis/bladder pain syndrome (IC/BPS)

Specie

Rat

Interest

- This model is suitable for testing compounds for effects on increased micturition frequency and decreased bladder capacity.
- Compounds that show a positive response in this model include NK₁ receptor antagonists and inhibitors of TNF- α , interferon γ and interleukines production.

Model Description

- Intravesical instillation of protamine sulfate (PS, 30 mg/mL) solution followed by a lipopolysaccharide (LPS, 5 mg/mL) solution.
- Cystometry is performed in anesthetized animals following PS/LPS administration.
- Test compounds can be administered *via* various routes (i.v., i.p., p.o., i.g. or s.c.) and cystometric parameters evaluated up to two hours post-administration.

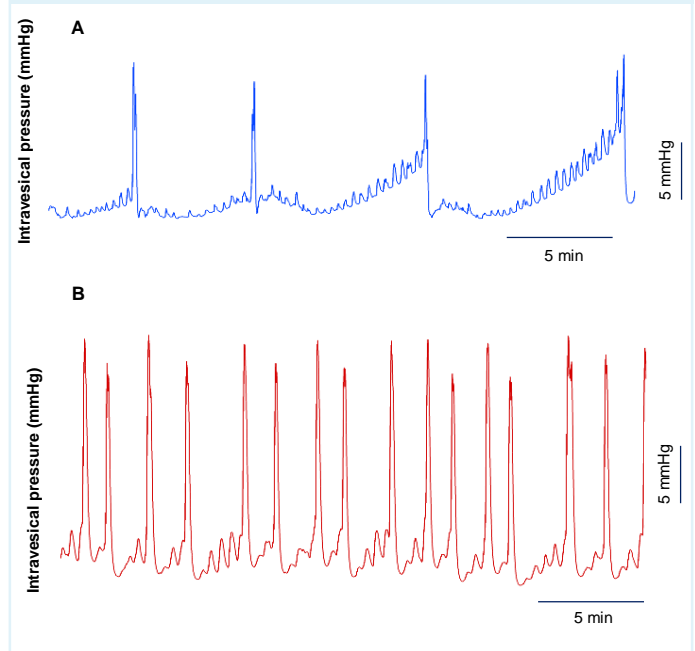
Parameters evaluated

- Bladder capacity
- Intercontraction intervals during cystometry
- Micturition pressure
- Micturition volume
- Basal intravesical pressure
- Threshold pressure for micturition

Scientific publications

- Saban MR *et al.*, Am. J. Physiol. Renal. Physiol. 282 : F202-210, 2002
- Lecci A *et al.*, J. Urol. 160: 206-209, 1998
- Gonzalez RR *et al.*, J. Urol. 173: 630-34, 2005

Typical cystometric recordings in rats treated with (A) saline or (B) PS/LPS (intravesical) before cystometry



Bladder capacity in rats treated with saline or PS/LPS

