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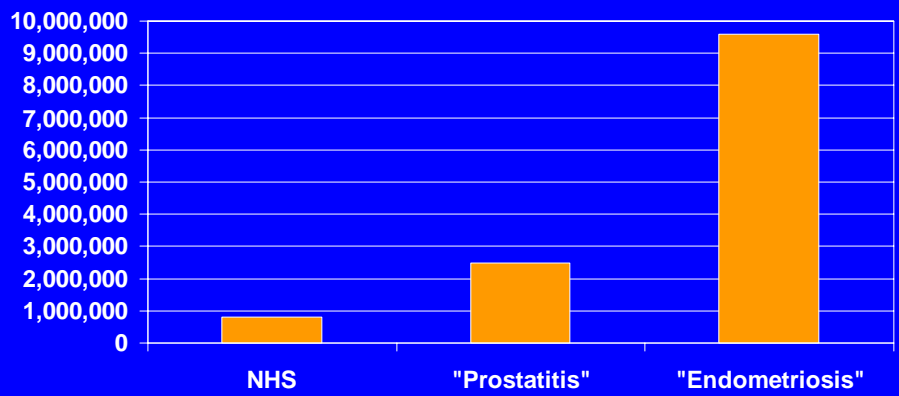


"I hope you're not going to be like the twenty incompetent doctors who couldn't find anything wrong with me."

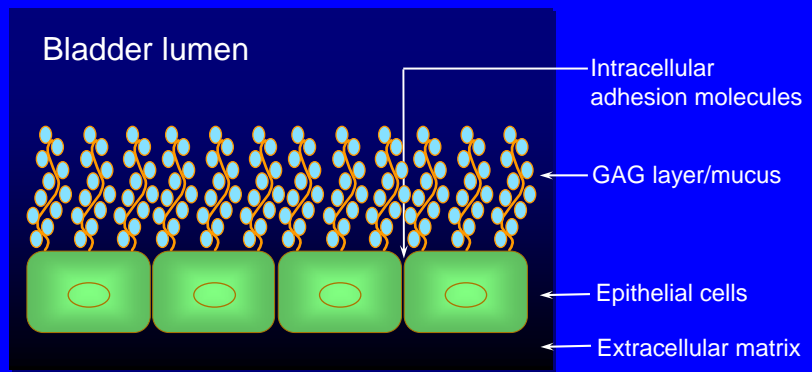
DELAYED DIAGNOSIS

- Mean time to diagnosis = 4-7 years
- Mean # of physicians = 8
- NIDDK criteria underdiagnoses >60%

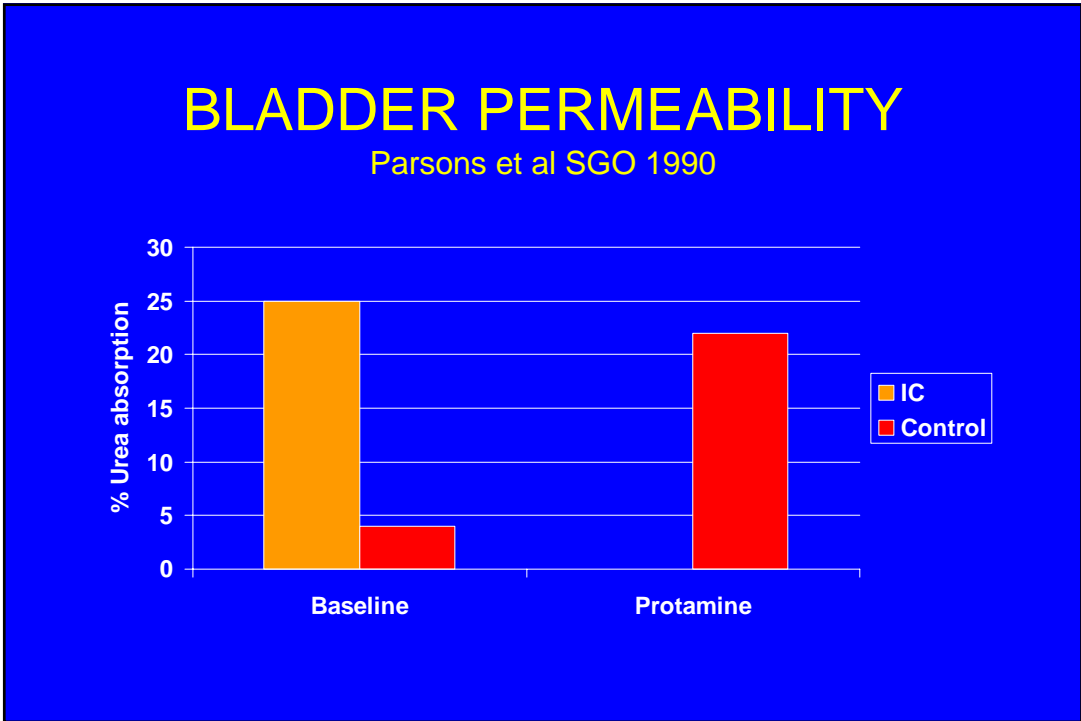
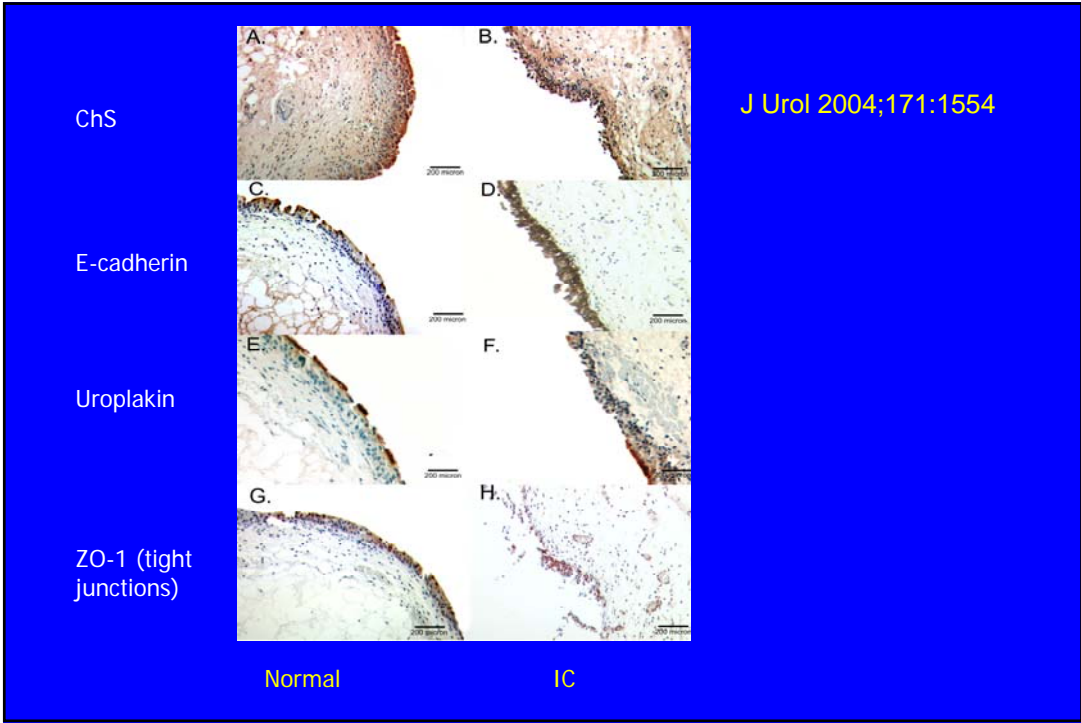
PREVALENCE



The Normal Bladder

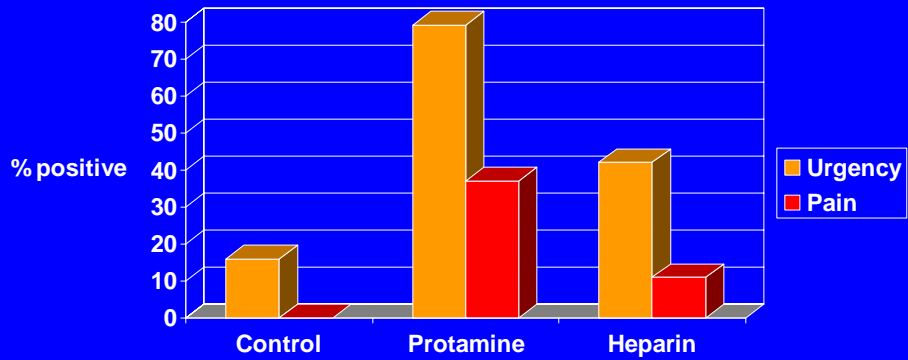


Slide courtesy of C. Lowell Parsons, MD



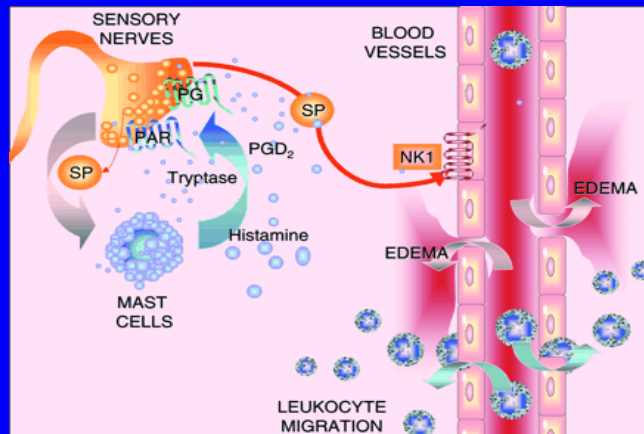
POTASSIUM STIMULATION

J Urol 1998; 159: 1862



MAST CELLS

Saban et al: Am J Physiol Renal Physiol 2002; 283F616



MAST CELLS

Urol 1997; 49 (supp): 108

- Detrusor mastocystosis
- Allergic rhinitis
- premenstrual flares
- irritable bowel syndrome, fibromyalgia
- multiple drug allergies

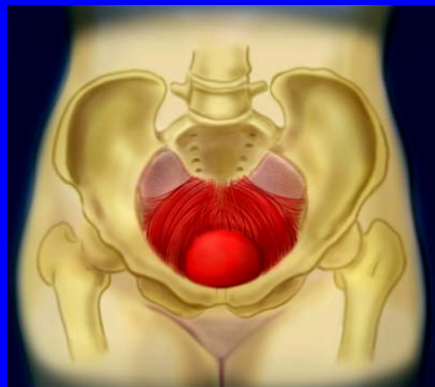
NEURAL UPREGULATION

- A δ myelinated fibers (mechanoreceptors)
- Unmyelinated C fibers (nociceptors)
- ATP P2X₃
- Histamine
- Substance P

CENTRAL PATHWAYS

- C-fos DRG, spinal cord
- DLC on-off-neutral

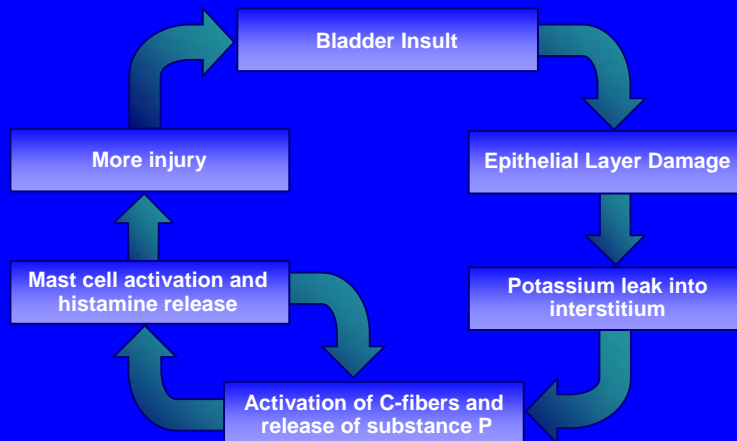
Pelvic Floor Spasm in IC



- Bladder inflammation
- Pelvic floor dysfunction

Slide Courtesy of Graham Bark, MD

Proposed Etiology of IC



CLINICAL PICTURE

- Urgency, frequency, nocturia, pain
- dyspareunia
- lack of incontinence
- negative UA and C&S
- failed prior antibiotics, anticholinergics

Flares and Remissions

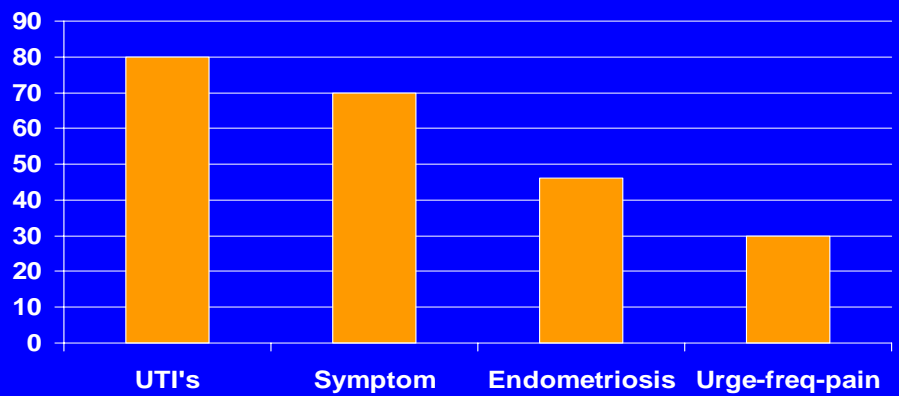
Common Causes of Flares

- Perimenstrual
- Sexual intercourse
- Diet
- Stress
- Cystitis/vaginitis
- Allergies



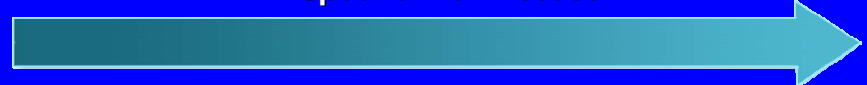
HOW DOES IC PRESENT?

J Urol 2001; 166: 2118

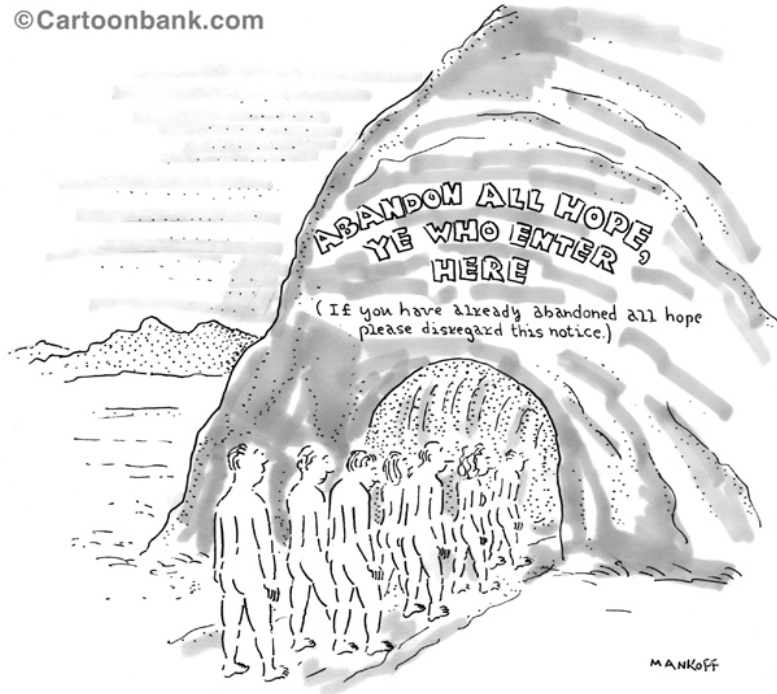


INTERSTITIAL CYSTITIS TIMELINE

Severity of Symptoms
A Spectrum of Disease

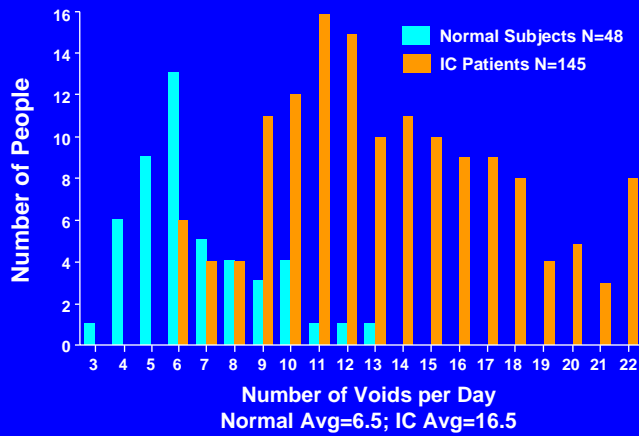


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Voids per Day

Normal Subjects vs. IC Patients



CL Parsons et al., *Urology*. 1991 37:207-12.

URINALYSIS



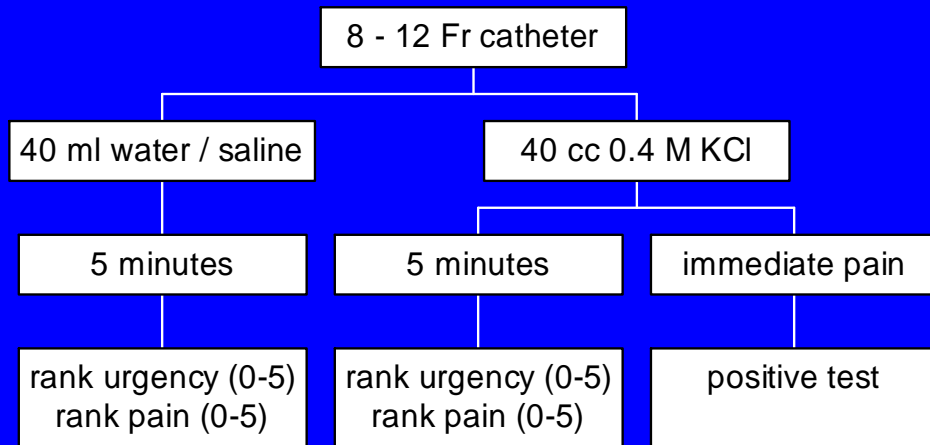
- Standing order for C&S when symptomatic
- Catheterize for C&S
- Hematuria workup?

DEFINITION

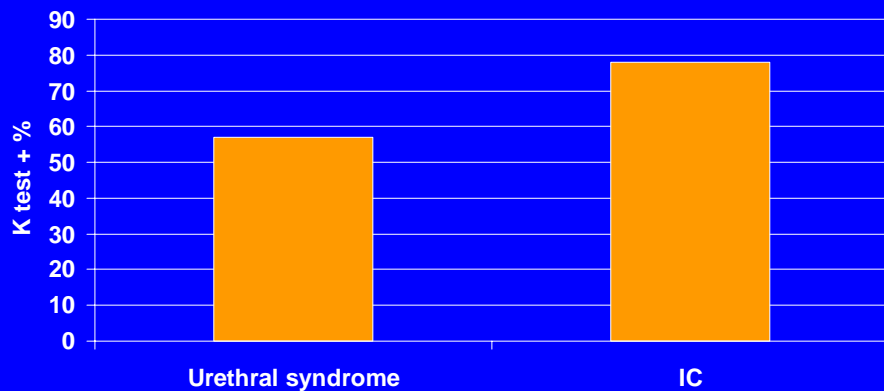
- Urgency, frequency, or pain in the absence of defined urinary pathology
- ignore NIDDK criteria
- no pathologic markers

POTASSIUM TEST

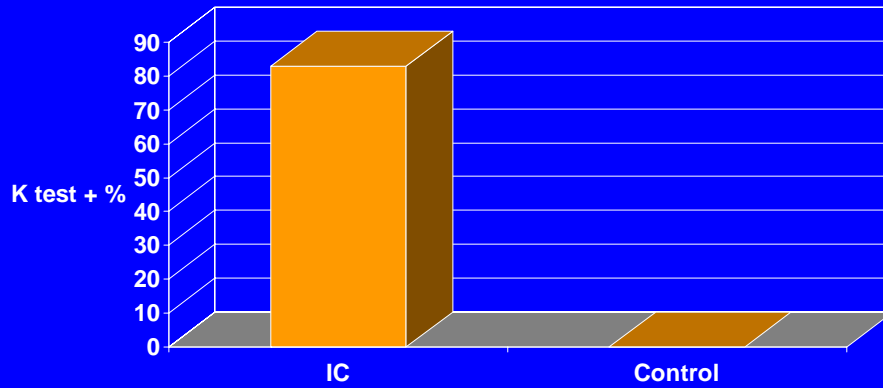
J Urol 1998; 159: 1862



URETHRAL SYNDROME VS. IC

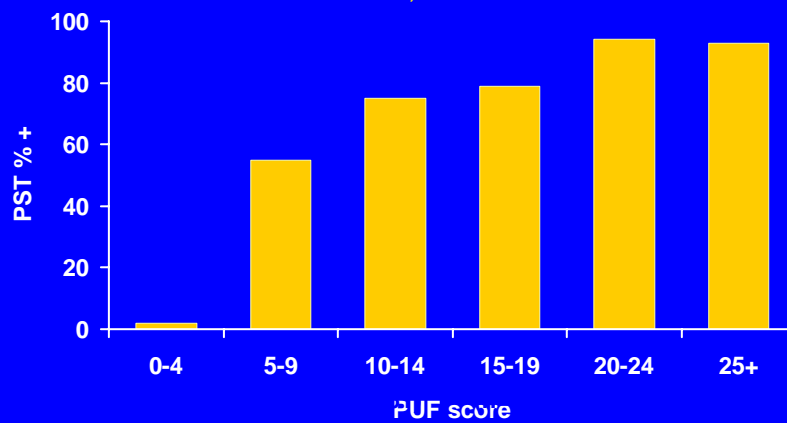


PELVIC PAIN / ENDOMETRIOSIS



PUF VS. PST

Urol 2002; 60: 573-8



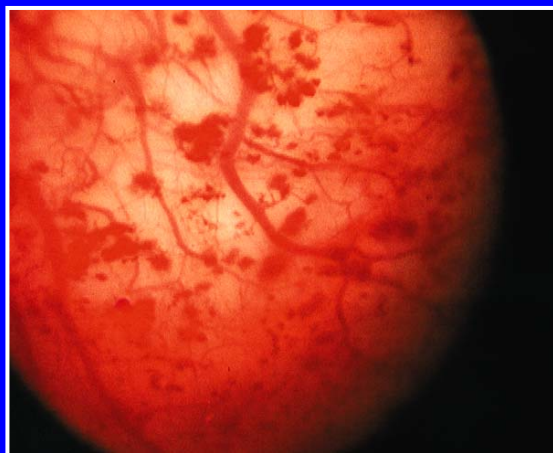
n=334 patients. 48 normals.

PROSTATITIS VS. MALE IC

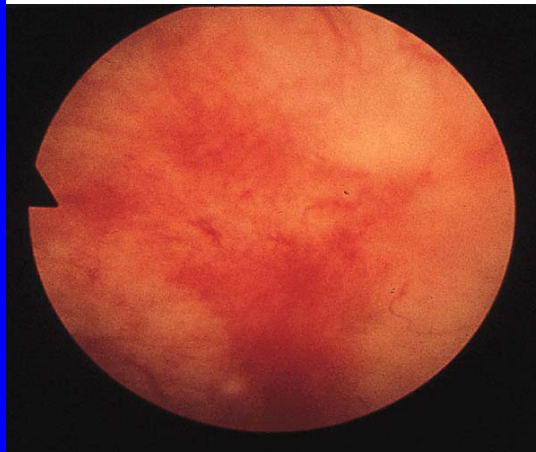
J Urol 1999; 162: 369, J Urol 1999; 162: 2014, Urol 1995; 45: 587; J Urol 2003; 170: 818

- mean age 39-48 years
- perineal, abdominal, testis, penile pain
- AUA-SS, dysuria, dyspareunia
- Prostate expressate not useful
- 67% no inflammation
- 60% diagnosed IC (glomerulations), 75% improve after hydrodistension

Glomerulations as Seen on Cystoscopy



Hunner's Ulcer



THINK IC

- Recurrent UTI
- overactive bladder
- chronic prostatitis
- chronic pelvic pain / endometriosis

PRINCIPLES OF THERAPY

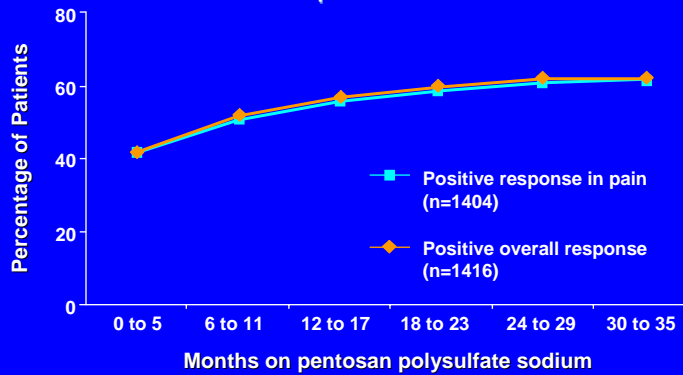
- treat triggers
- treat epithelium
- treat allergies
- treat neural up-regulation

ELMIRON EFFICACY

- 4 double blind studies all showed significant pain relief versus placebo
 - Parsons, CL, *J Urol* 1987 Sep;138(3):513-6
 - Bade, JJ, *Br J Urol* 1997 Feb;79(2):168-71
 - Holm-Bentzen M, *J Urol*. 1987 Sep;138(3):503-7
 - Mullholand, SG, *Urology* 1990 Jun;35(6):552-8

Pentosan Polysulfate Sodium (Elmiron®)

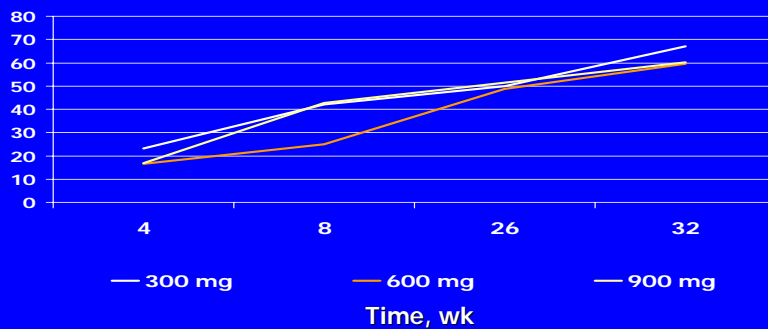
Percentage of Patients With Moderate Improvement or Better



Hanno PM. *Urology*. 1997; 49(suppl 5A):93-99.

Elmiron® Dose-Ranging Trial

% of Patients Completing, With PORIS 50%

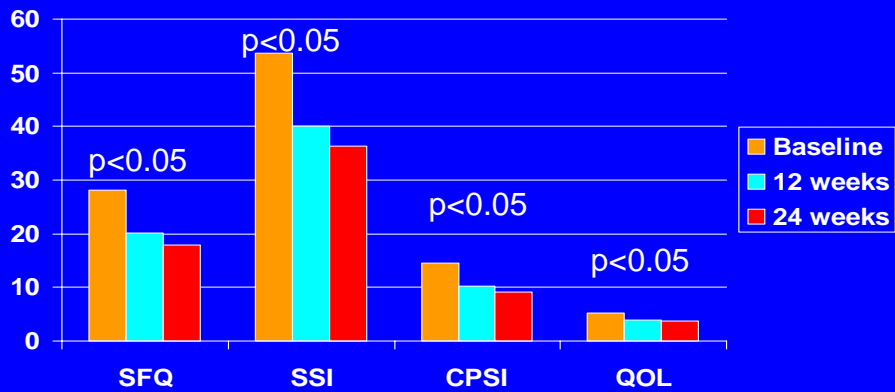


PORIS = Patient's overall rating of improvement of symptoms.

34

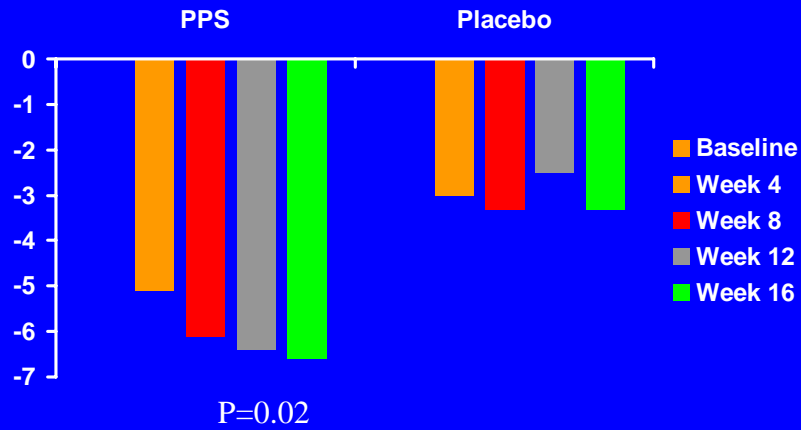
PPS FOR CHRONIC NONBACTERIAL PROSTATITIS

Nickel et al: Urol 2000; 56: 413



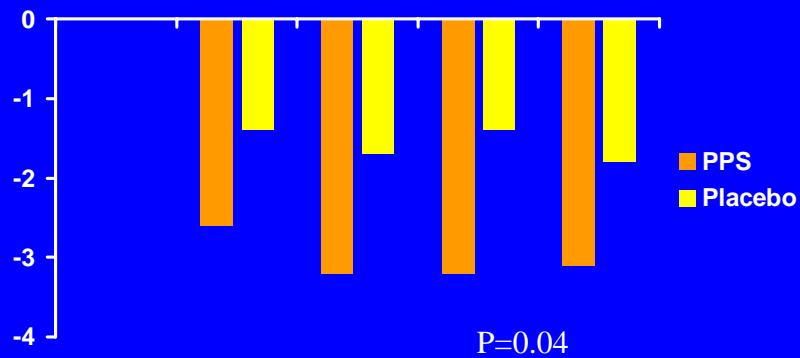
Reduction in Total NIH-CPSI

Change From Screening/Baseline (Intent-to-Treat Patients)



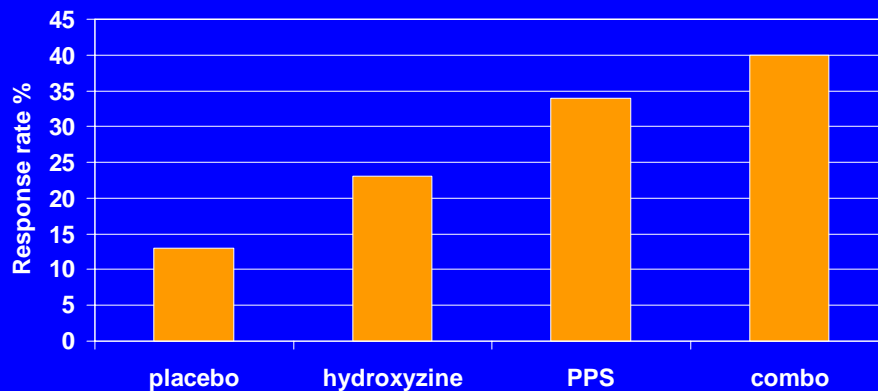
Reduction in Pain

Change From Screening/Baseline (Intent-to-Treat Patients)



PPS AND HYDROXYZINE

J Urol 2003; 170: 810



TIMELINE

J Urol 2003; 170: 810

Elmiron
Atarax

Elmiron
Atarax
Elavil

Elmiron
Atarax
Elavil/neurontin
DMSO
Hydrodistension
Interstim

Recurrent
UTI diagnosis

Urethral
syndrome

Mild/moderate
Interstitial
Cystitis

NIH
cases

Advanced IC

Dr. Teichman,

Thank you so much for the care that you have given me thru the years.

I appreciate everything that you have done for me. Words cannot express the gratitude that I have for you.

You will always be my favorite Doctor.