

Evaluation and Management of Fibromyalgia

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Overview of Fibromyalgia

- Common: 3.4% of women and 0.5% of men in the United States
- Accounts for 25% of all visits to rheumatologists in the United States
- A distinct clinical entity, as defined by the American College of Rheumatology (1990)

CURRENT PARADIGM

Fibromyalgia Tender Points



Anterior

Posterior

Anterior

Posterior

Definition of Fibromyalgia Syndrome

- Widespread Pain: Above and below the waist, on the left and right side of the body, and involving the axial skeleton
- Pain at 11 of 18 tender point sites on digital palpation
- Symptoms present for at least 3 months

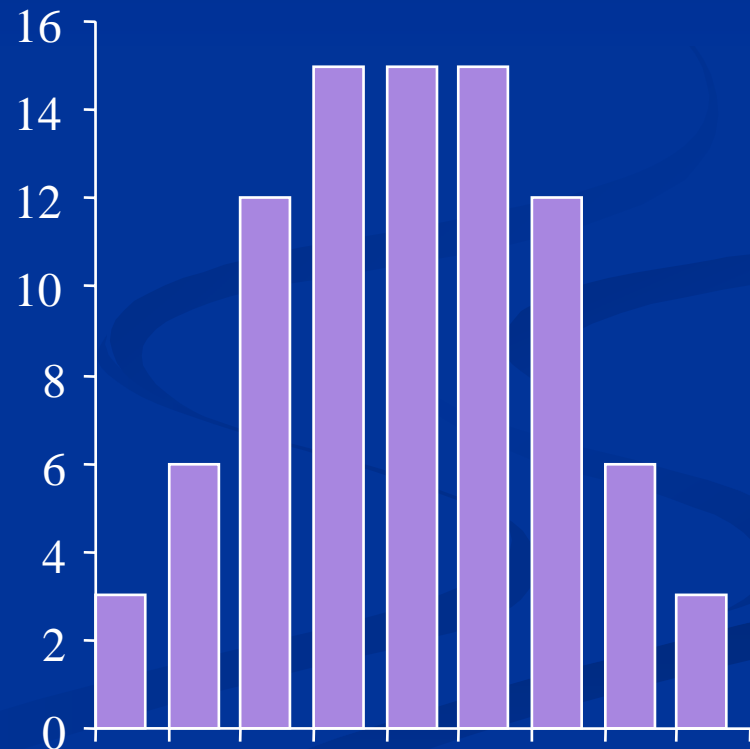
Tender Points Problems

- The least objective way to measure tenderness, being highly correlated with psychological factors, especially distress
- Gives inappropriate impression about the nature of the problem in fibromyalgia (i.e., in the muscle)
- Accounts for over-representation of distressed, unfit, females
- Not a good measure – not normally distributed. Rarely improves in clinical trials

Pain in the General Population

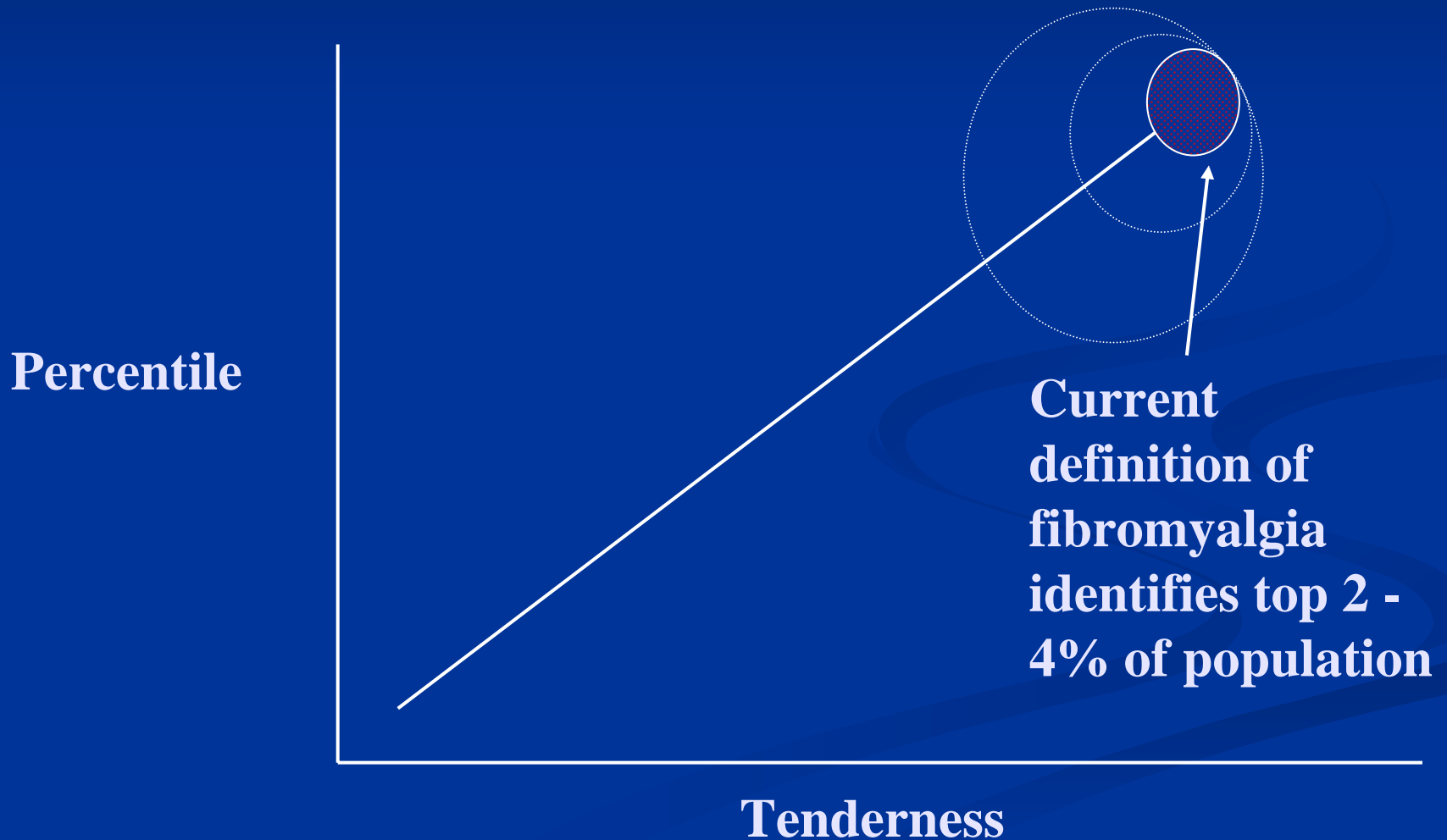
- Pain and tenderness occur as a continuum in the population
- 10% of the adult U.S. population has chronic widespread pain; 20% has chronic regional pain (Wolfe)
- Tenderness increases with age and female gender

% of Population



Tenderness

Pain Continuum



Overlap With Other Syndromes

FIBROMYALGIA

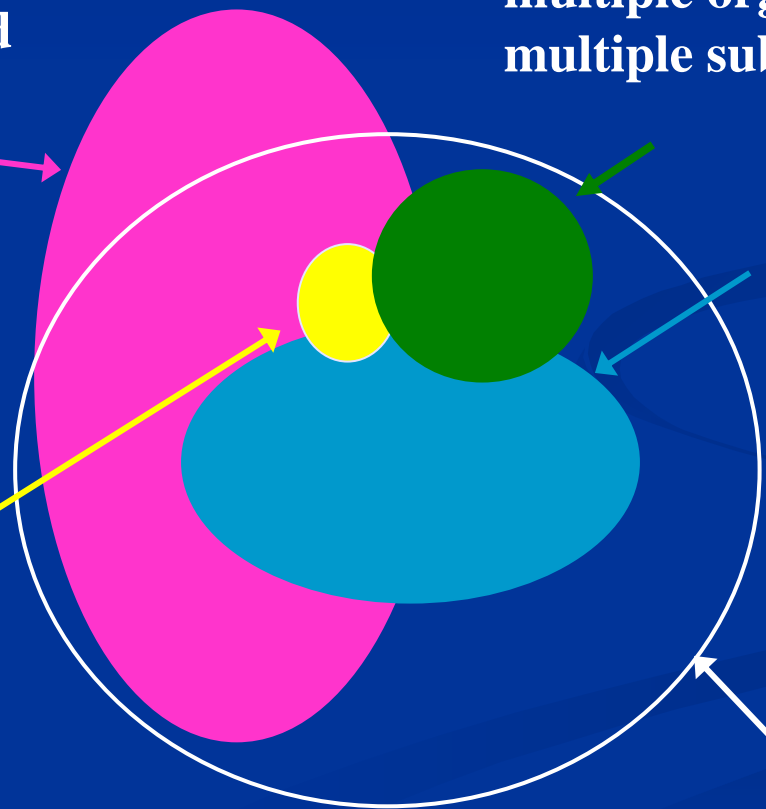
2 - 4% of population;
defined by widespread
pain and tenderness

MULTIPLE CHEMICAL

SENSITIVITY - symptoms in
multiple organ systems in response to
multiple substances

EXPOSURE

SYNDROMES e.g.
Gulf War Illnesses,
silicone
breast implants,
sick building
syndrome



**CHRONIC FATIGUE
SYNDROME** 1% of
population; fatigue and
4/8 “minor criteria”

**SOMATOFORM
DISORDERS** 4% of
population; multiple
unexplained
symptoms - no
organic findings

Symptoms and Syndromes Related to Fibromyalgia

Tension/migraine headache

Affective disorders

Temporomandibular
joint syndrome

Constitutional

Weight fluctuations

Night sweats

Weakness

Sleep disturbances

Irritable bowel
syndrome

Nondermatoma
paresthesias



Cognitive difficulties

ENT complaints (sicca sx.,
vasomotor rhinitis, accommodation
problems)

Vestibular complaints

Multiple chemical sensitivity,
“allergic” symptoms

Esophageal dysmotility

Neurally mediated hypotension,
mitral valve prolapse

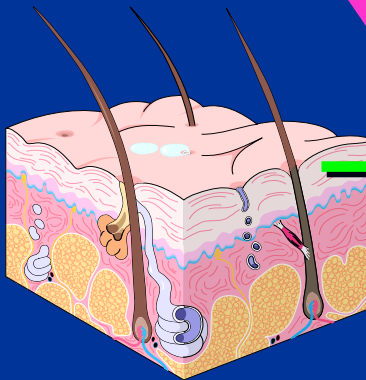
Non-cardiac chest pain, dyspnea
due to respiratory mm. dysfunction

Interstitial cystitis,
female urethral syndrome,
vulvar vestibulitis, vulvodynia

Mechanisms of Pain

Acute pain

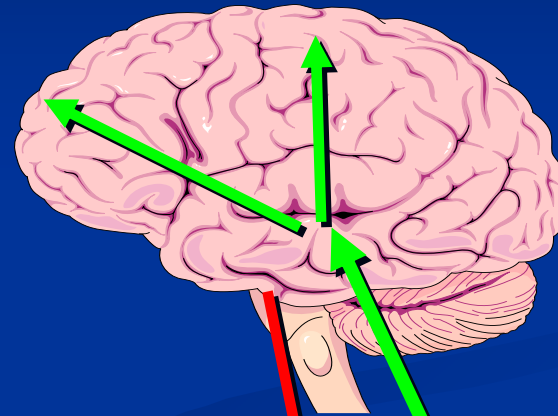
Peripheral nociceptive input from thermal, chemical or mechanical nociceptors



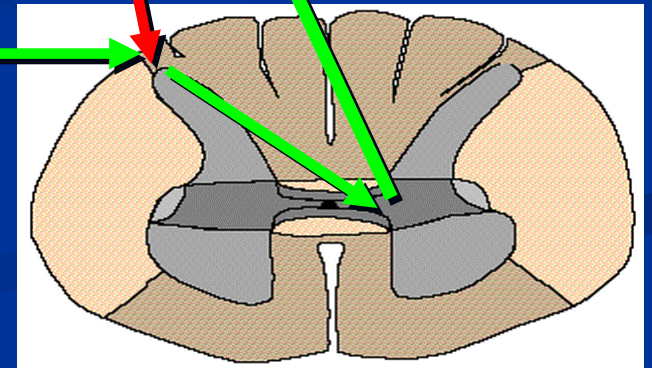
Stimulus

Chronic pain

Central factors typically predominate



Brain



Spinal cord from Robert Bennett, MD

Chronic Pain – Defined by Mechanisms

■ Peripheral (nociceptive)

- Primarily due to inflammation or damage in periphery
- NSAID, opioid responsive
- Behavioral factors minor
- Examples
 - OA
 - Acute pain models (e.g. third molar, post-surgery)
 - RA
 - Cancer pain

■ Central (non-nociceptive)

- Primarily due to a central disturbance in pain processing
- Tricyclic responsive
- Behavioral factors more prominent
- Examples
 - Fibromyalgia
 - Irritable bowel syndrome
 - Tension and migraine headache
 - Interstitial cystitis / vulvodynia, non-cardiac chest pain / etc.

■ Mixed

■ Neuropathic

Sensory processing in fibromyalgia

A problem with the “volume control”

- Patients display a normal “detection threshold”, but an increased sensitivity, to noxious levels of not only pressure, but also other stimuli, e.g. heat, noise, electrical stimulation.
- The general increase in sensory sensitivity could theoretically be due to psychological or physiological factors including:
 - “expectancy” or “hypervigilance”
 - central changes in nociceptive processing (e.g., sensitization or reduced descending pain inhibition).

History

- Diffuse, Widespread Pain
- Fatigue
- Nonrestorative sleep
- Associated sx's (IBS, HA, dyspareunia, etc.)
- Look for evidence of Obstructive Sleep Apnea
- Risk factors for Hepatitis C

Physical Exam

- Often unremarkable, except for tenderness

Laboratory Testing

- WSR
- TSH
- Hepatitis C antibodies, if risk factors present
- Avoid “Diagnostic Waffling”

Differential Diagnosis

■ COMMON

■ Hepatitis C

■ PMR

■ Sleep Apnea/PLMS

■ Hypothyroidism

■ Depression

■ LESS COMMON

■ RA

■ SLE

■ Sjogren Syndrome

■ Addison disease

■ Cushing syndrome

■ Hyperparathyroidism

Nonpharmacologic Management

- “Front-Load” time with patients
- Education: This is a non-destructive condition
- Empower the patient: This is their condition to manage with your help
- www.med.umich.edu/painresearch/education/fmoverview.htm
- www.arthritis.org

Management of Fibromyalgia

- Regular aerobic exercise (aquatherapy is good)
- Proper sleep hygiene; restore normal sleep patterns
- Use medications as an adjunct to therapy, not as the sole treatment
- Avoid diagnostic waffling!
- Set reasonable goals with the patient
- Cognitive Behavioral Therapy can be valuable

Pharmacologic Therapy

- There are no drugs indicated for the treatment of fibromyalgia

Tricyclic Antidepressants

- Cornerstone of drug therapy for fibromyalgia
- Amitriptylene (up to 75 mg HS) and cyclobenzepine (up to 40 mg daily) are the best studied agents
- Start low-dose to maximize compliance

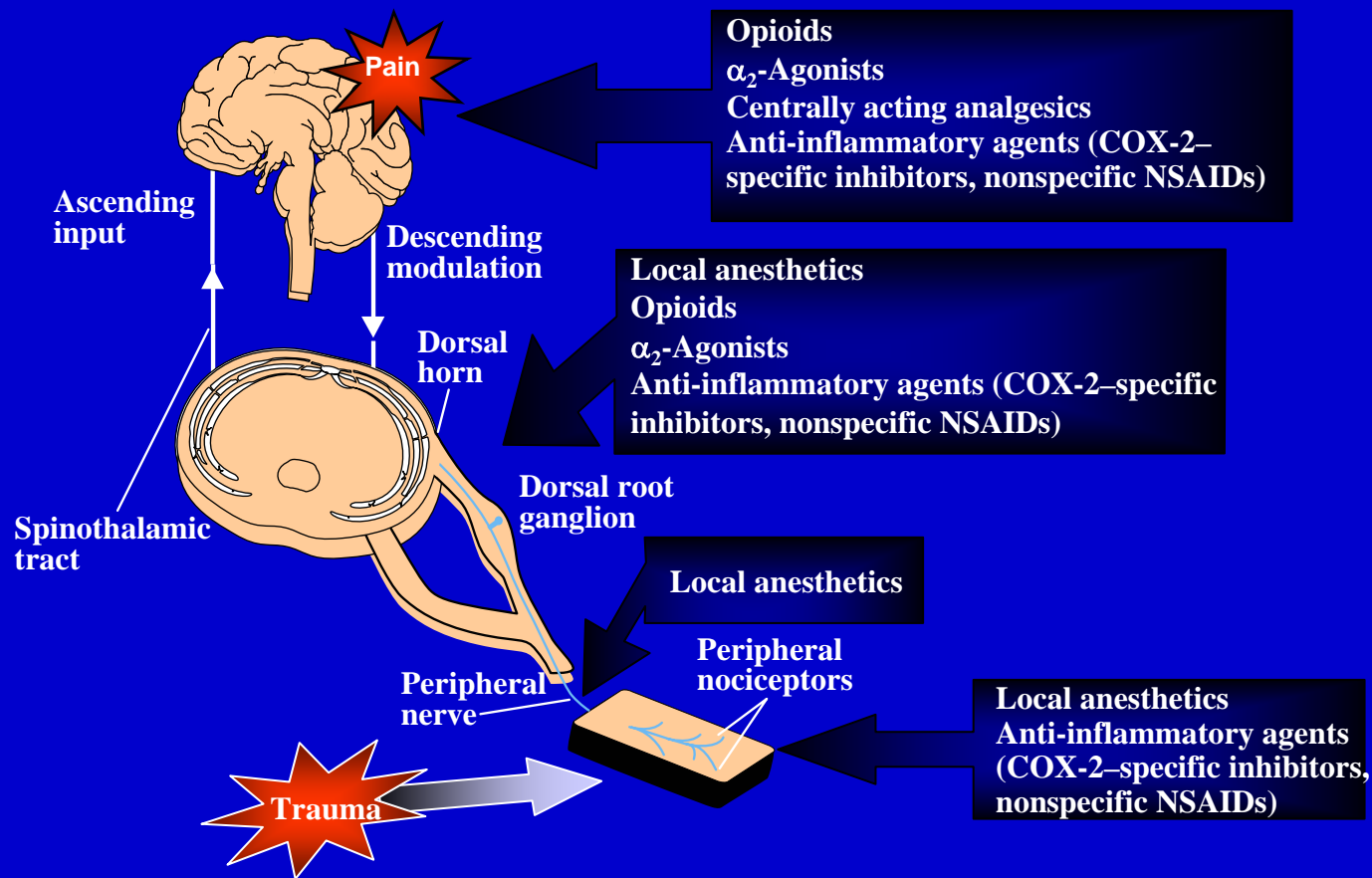
Other Antidepressants

- Trazodone 50-150 mg HS
- SSRIs not very effective
- Mixed adrenergic/dopaminergic agents such as venlafaxine or nefazodone may be more efficacious

Analgesics

- More effective in peripheral pain resulting from activation of nociceptors
- Limited efficacy in fibromyalgia, but widely used

Analgesics Affect Different Parts of the Pain Pathway



Other Analgesics

- Opioids
- Tramadol

Hypnotics

- Benzodiazepines
- Zolpidem

Other agents that may be useful

- Gabapentin-titrate dose based on tolerability (may need up to 1200 mg tid-qid for efficacy in fibromyalgia)
- Dextromethorphan (150-200 mg/day in studies; caution when using with SSRIs)

Summary : What is Fibromyalgia?

- A discrete disorder
- The end of a continuum (everyone has a little FM sometimes; some people have a lot all the time)
- The prototypical chronic central pain state, that can help us understand central mechanisms that play a role in pain transmission in both pure central pain syndromes (i.e. FM), as well as a subset of individuals with “mechanical” and “inflammatory” pain

Bottom Line

- Fibromyalgia is a real disorder
- Patients with fibromyalgia do suffer
- Behavioral therapy is vital for successful management
- Regular aerobic exercise is crucial
- Medication is an adjunct to therapy