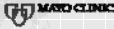






*Efficacy of a Comprehensive
Pain Rehabilitation Program
with Opioid Withdrawal:
A Longitudinal Study*

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Team: MD, PhD, PharmD, CNS, RN, MA, OT, PT

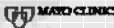
Program options, utilizing a CBT approach

- 3-week outpatient rehabilitation, adult population
- 3-week outpatient rehabilitation, adolescent population with intensive family programming

Cognitive-behavioral approach

- Improvement of physical functioning
- Improved general functional status (ADLs, social, household, recreational)
- Improved vocational/school functioning
- Reduction in health care utilization
- Reduction/discontinuation of opioids, sedative-hypnotic and over the counter medications
- Reduction in pain level (not always attainable)




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A longitudinal study of the efficacy of a comprehensive pain rehabilitation program with opioid withdrawal: Comparison of treatment outcomes based on opioid use status at admission

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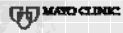
Study Design

- Longitudinal 2 group pre-post design
- Compared 373 consecutive patients admitted to Mayo PRC
- Admission, discharge and 6 month data
- Compared opioid and non-opioid groups





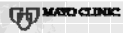
Outcome Measures

- Multidimensional Pain Inventory (MPI)
- CES-D
- Pain Catastrophizing Scale
- SF-36



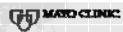
PRC Patient Characteristics (N=373)

- Average age 45 years (range 18 to 83)
- 96% Caucasian
- 79% female
- 28% employed
- Primary Pain Complaint:
 - Back (24%), fibromyalgia (20%), chronic headache or migraine (12%)
- Average Pain Duration 9.4 years
- Failed all other treatments

Characteristics of Opioid Use

- Opioid use status: 57% daily opioids
- Mean Morphine Equivalent dose: 99.0 mg (range 1.0 to 1060 mg/qd)
- Duration of opioid use: mean, 3.9 years
 - 20% less than one year
 - 65% two or more years
 - 30% five or more years

CNCP Patients on Chronic Opioid Therapy

- No differences in demographic or pain characteristics between opioid group -non-opioid group

Pre-treatment:

- Opioid group reported significantly greater pain severity, and depression than non-opioid group
- Opioid group used significantly more benzos, muscle relaxants & anticonvulsants than non-opioid group.
- High levels of pain catastrophizing and debilitation comparable to patients not taking opioids.

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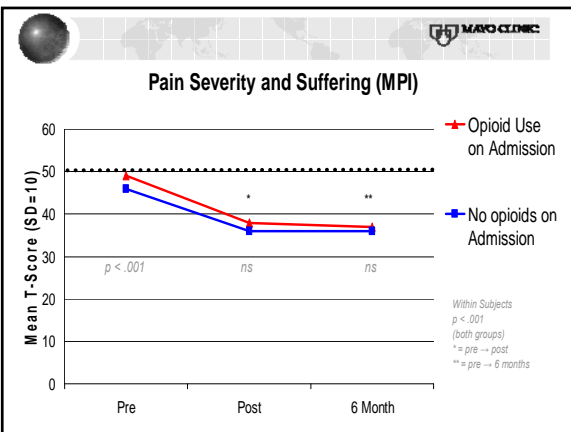
Post Pain Rehab with Opioid Withdrawal

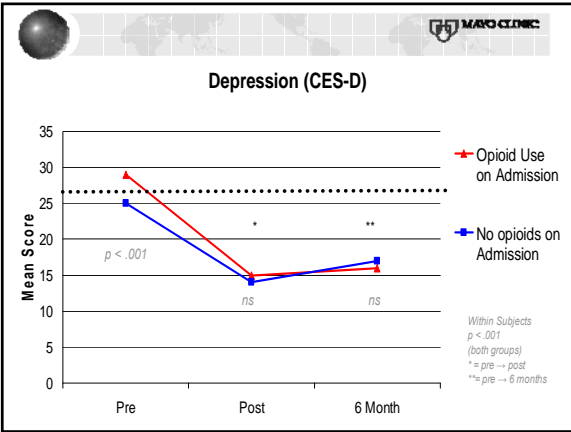
- 91% complete 3-week treatment
- 93% of those on daily opioids tapered completely off by end of treatment
- Significant reduction in benzo, NSAIDS, muscle relaxants, anticonvulsants, tricyclic antidepressants
- SSRI use remained the same
- Duloxetine use increased

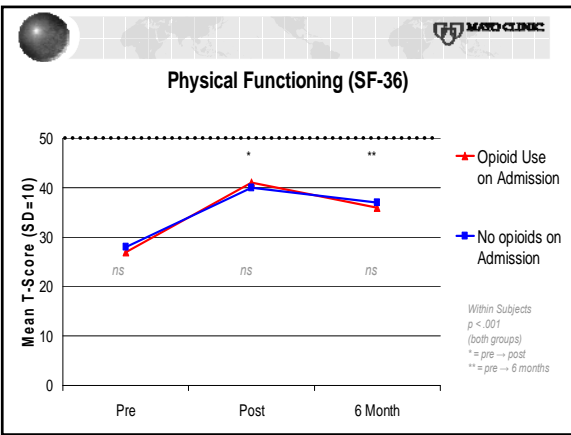
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Patients who tapered off opioids reported:

- Comparable treatment success at discharge as patients who were not taking opioids.
- Significant decrease in Pain severity, Life Interference due to pain, Depression, and Pain Catastrophizing ($p < .001$)
- Significant increase in Perceived life control, General Activity Level, Health Perception, Physical Functioning, Activities of Daily Living, Social Functioning ($p < .001$)







6-months Post treatment

- Results were same for patients withdrawn from low-dose (<100 mg; $M=39$ mg/qd) and high-dose (≥ 100 mg/qd; $M=260$ mg/qd) opioids
- 33 patients (14%) who completed treatment and returned survey were taking opioids
- Overall, improvements in pain, functioning and mood were maintained six months following treatment even when the majority of patients reported continued abstinence from opioid analgesics



Implications

- Opioid induced hyperalgesia could be a reason for greater pre-treatment pain and depression scores for opioid group
- Cannot infer causal relationship due to study methodology
- Opioid withdrawal did not interfere with rehabilitation



Study Limitations

- Lack of a control group
- Subject attrition
- Self reported data
- Limited diversity

Future studies:

- Specific pain populations



Conclusion

- Patients with debilitating chronic pain *CAN* experience significant and sustained improvement in *pain* and *functioning* following pain rehabilitation that incorporates opioid withdrawal.

Efficacy of a Comprehensive Pain Rehabilitation Program with Opioid Withdrawal: A Longitudinal Study

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I. Overview of Mayo Clinic Multidisciplinary Pain Rehabilitation Program

II. Efficacy of Cognitive Behavioral Therapy

IASP 10th World Congress (2005)

Cognitive Behavioral Therapy is as effective for a heterogeneous group of chronic pain sufferers as any published therapy for any specific type of pain

Turk (2002) Review of comprehensive pain rehabilitation programs

- more cost effective than implantation of spinal cord stimulators, intraspinal drug delivery systems/surgery
- significantly greater reduction in medication use, and health care utilization
- significantly greater increases in functional activities, return to work, closure of disability claims
- substantially fewer iatrogenic consequences/adverse events

APS Task Force Review (2006) - Compared to different treatment modalities including the standard medical approach or medication management, Multidisciplinary Pain Rehabilitation is the only therapeutic approach that has demonstrated treatment efficacy and cost-effectiveness for functional restoration and major outcome variables (pain severity, healthcare utilization, medication use, disability claims).

III. Chronic Opioid Therapy for Chronic Pain

In 1997, APS and AAPM issued statements that opioid therapy for Chronic Non-Cancer Pain is a legitimate medical practice.

- Minimized concerns of addiction, respiratory depression and other side effects, and tolerance
- 1997-2005
 - 90% increase in opioid prescriptions
 - Money spent on marketing for opioids increased from \$11 to \$30 billion
 - Spending on outpatient prescriptions tripled in 10 years (4.2 in 1996 to 13.2 billion in 2006; AHRQ, 2009)

What did the Consensus statement REALLY say??

- “periodic reexamination is warranted to assess the nature of the pain complaint and to ensure that opioid therapy is still indicated. Attention should be given to the possibility of a decrease in global function or quality of life as a result of opioid use” [1997, p. 3].
- “Consideration should be given to different treatment modalities, such as a formal pain rehabilitation program, the use of behavioral strategies, the use of noninvasive

techniques, or the use of medications, depending upon the physical and psychosocial impairment related to the pain” [1997, p. 3].

Efficacy for Chronic Opioid Therapy

Six meta-analyses and reviews of randomized, double-blind, placebo-controlled trials of opioids for CNCP

Flawed Empirical Efficacy

- Significant drop out rates/exclusion criteria
- Very short-term outcomes (avg. **5 weeks!**)
- Lack of clinically significant reduction in pain
- No documented improvement in functioning
- Possible publication bias

Additional Reasons for Concern

- Tolerance/Dependence, Addiction
- Possible Opioid-induced Hyperalgesia
- Opioids maintained despite decline in functioning and no improvement in pain (fear motivated?)
- Pain behaviors predict physicians’ prescriptions

IV. Evidence-based practice guidelines for CNCP and opioids

Conclusions: ICSI, 2008; Sanders et al., 2005

- Controlled opioid trials have limited applicability to the long-term use of opioids in clinical practice
- Clinicians should consider other forms of treatment including rehabilitation approach that emphasizes self-management and functional restoration

V. Study Description (See power point)

VI. Patient Outcomes (See power point)

VII. Conclusions (See power point)

VIII. Additional Resources

- Mayo Clinic Guide to Pain Relief by Barbara Bruce, PhD and W. Michael Hooten, MD (2008) Available: <http://bookstore.mayoclinic.com>
- Psychological Approaches to Pain Management, Second Edition: A Practitioner's Handbook by Dennis C. Turk and Robert J. Gatchel (Editors) (2002) ISBN: 1572306424
- Managing Chronic Pain: A Cognitive-Behavioral Therapy Approach by John Otis (2007) Therapist Guide, ISBN13: 9780195329162; Workbook, ISBN13: 9780195329179
- Managing Pain Before It Manages You by Margaret Caudill, Herbert Benson (2001) ISBN-13: 9781572307186
- Manage Your Pain by Michael Nicholas, Allan Molloy, Lois Tonkin, Lee Beeston and Charles Pither (2006) ISBN-13: 9780285636798