Connecting Challenges and Opportunities in Chronic Musculoskeletal Conditions

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UW HEALTH
NORTHEAST FAMILY MEDICAL CENTER

Red Team
Challenges

► Therapy for MSK pain is often ineffective

► Understanding of disease is changing
  - Multifactorial
  - Complex, Less inflammatory, More degenerative

► Most Common Conditions
  - Low Back Pain
  - Overuse tendon disease (tendinopathy, plantar fasciopathy)
  - Osteoarthropathy
Challenges

► Calls for new innovative therapy and care plans for common conditions

- Agency for Healthcare Research and Quality
- Institute of Medicine
- NIH, DoD
- Patients!
Case: Knee Osteoarthritis

- Ben 61 yo male; generally well; BMI 29
- Progressive knee OA on clinical and radiological exams; increased pain with activity and overall reduced function
- Tried weight loss, PT, NSAIDS, HA injections
- He has difficulty at events of his grown children, and with playing with his grandchildren
Opportunity

► Find Better Therapy
Jeff Patterson
Doctor
Teacher
Friend
Opportunity: Innovate

- Prolotherapy is an injection therapy for chronic MSK pain (LBP, tendinopathy, OA)
- Multiple injections at ligament and tendon attachments, and within joints
- Hypertonic dextrose most common injectant
- Mechanism of action unclear; multifactorial
  - Stimulates local native healing
    - Inflammation
    - Growth factors
    - Direct Neurogenic Response, Reduced Pain Response
    - Other?
Reduce Pain and Disability
Restore Overall Integrity
Prolo RCT for Knee OA: Hypothesis

- Prolotherapy can safely improve knee pain, stiffness and function c/t Controls and...
Knee OA Trial: Recruitment

Clinic Records
Screen/Media/Direct

Phone Screen

Case Series

Meeting (Consent, Randomization, Baseline Status)

Exercise N=31

Saline N=29

Dextrose N=30

Meeting (Info, Consent, Q’naires)

Dextrose N=36

Follow up questionnaires
5, 9, 12, 24 & 52 weeks
Change in WOMAC Composite Scores over 12 Months

- **Dextrose**
- **PT**
- **Saline**

Baseline wk 5 wk 9 wk 12 wk 24 wk 52
What about longer term?
Long-Term Follow-Up

Change in WOMAC (0-100) Score vs. Weeks

-15 -10 -5 0 5 10 15 20 25 30 35
0 20 40 60 80 100 120 140

Weeks
Long-Term Follow-Up

All Subjects (N=65)

Change in WOMAC (0-100) Score vs. Weeks
Long-Term Follow-Up

All Subjects (N=65)

Responders (N=53/65)

Change in WOMAC (0-100) Score vs. Weeks

-15 -10 -5 0 5 10 15 20 25 30 35

0 20 40 60 80 100 120 140

Weeks
Long-Term Follow-Up

All Subjects  (N=65)

Responders  (N=53/65)

Non Responders  (N=12/65)

Change in WOMAC (0-100) Score

Weeks
Clinical Context

► Rigorous methodology
► Substantial improvement c/t baseline among prolotherapy participants for most
► Safe, well tolerated, high satisfaction
► Compare well to standard of care
► Covered by Unity, but only Unity
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- Post-Prolo: increased activity, decreased pain; danced at daughter’s wedding; plays with grandkids; satisfied at one year.
Take Intellectual Risks: Assess new therapy

- Regenerative Therapy
  - Prolothearpy
  - Platelet Rich Plasma
  - Mesenchymal Stem Cells

- Manual Therapies
  - Osteopathy

- Others

- Accessible team based care
Thanks!