The SPORT Study: What Have We Learned About Non-Operative Care?

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“In All Matters of Opinion, Our Adversaries are Insane”

Mark Twain

SPORT Study

SPORT – A Randomized Trial

JAMA, November 2006, Vol. 296

SPORT Observational Cohort

JAMA, November 2006, Vol. 296
SPORT HNP Study

**Randomized Trial**
- Patients Randomized to Treatment
- Intention to Treat Analysis
- Standard Open Discectomy vs. Non-Operative Treatment “Individualized to Patient”

SPORT Exclusion Criteria

- Multiple Criteria to Isolate Radicular Pain Only Due to HNP
- Willingness to Have Surgery Within 6 Months

SPORT Randomized Study

- Surgical Group
  - 140/232 (60%) Had Surgery
- Non-Surgical Group
  - 107/240 (45%) Had Surgery

Patient Preferences and Expectations for Care: Determinants in Patients with Lumbar HNP

*J Lurie, et al, SPINE, Vol.33*
**SPORT Study**

*Observational Cohort*

- Baseline Characteristics Matched Closely to Intention to Treat Group
- Non-Randomized
- Standard Open Discectomy vs. Usual Non-Operative Care

**SPORT HNP Trial Pre-Enrollment Treatment**

- Education/Counseling 71%
- PT 67%
- Epidural Injection 42%
- DC Rx 32%
- NSAID’s 61%
- Opiates 40%

**SPORT Surgical Treatment**

- Specific Methods Defining the Intervention and Type of Surgical Technique
- 22 Lines, 2 References of Description

**SPORT Non-Operative Treatment Group**

*“Usual Care”*

- Study Protocol Recommended Active PT, Education, Home Exercise Instruction, NSAIDs
- “Other” Non-Operative Treatments were Listed
**SPORT**

**Non-Operative Treatment Group**

- All Patients (N=323) Received Non-Operative Care in First Year
  - Physical Therapy (44%)
  - Injections (56%)
  - NSAIDs (60%)
  - Oral Steroids (5%)
  - Activity Restriction (29%)

**SPORT**

**Randomized Non-Operative Treatment**

**Clinical Management**

- Surgeon 37%
- Internist/Neurologist/Other MD 60%
- Chiropractor 11%
- Acupuncturist 4%

**SPORT Randomized**

*Chose Non-Operative Care*

- Higher Income
- Upper Level HNP
- Improving
- Not Getting Worse

**Lumbar Disc Herniation: A Controlled, Prospective Study with Ten Years of Observation**

*Weber H, SPINE, Vol 8, 1976*
Nonoperative Treatment of Herniated Lumbar Intervertebral Disc with Radiculopathy: An Outcome Study


The Natural History of Lumbar Intervertebral Disc Extrusions Treated Non-Operatively

Dr. Saal’s Guide to Non-Operative Care

- Achieve Adequate Pain Control to Allow for Active Rehabilitation Specific Exercise
- Carefully Guide Activities to Match Status and Avoid Flare Up or Loss of Treatment Effect

Dr. Saal’s Guide to Non-Operative Treatment

**Epidural Injection for HNP**
- Fluoroscopic Guided TFE
- Adequate Dose and Type with Steroid
- Achieve Technical Success
- Time Treatment to Clinical Picture

Dr. Saal’s Guide to Non-Operative Treatment

**Active Exercise for HNP**
- Intensity Matched to Patient Clinical Status
- Tailor “Neutral Spine” Posture to Exercise Choices
- Limit Confounding Exercise/Activity

Dr. Saal’s Guide to Non-Operative Treatment

**Pain Control**
- NSAID’s
- Ice
- Positioning/Activity
- Ca+ Channel Blockade
Dr. Saal’s Guide to Non-Operative Treatment

**Pain Control**

- Identify Depression
- Oral/Injected Corticosteroid
- Acupuncture
- Opiates
- Rest

**Epidural Injection Timing**

- Spontaneous Regression Curve
- 8 Week Rule for Durable Treatment Effect

**SPORT Study**

**HNP Combined Cohort**

- Non-Operative Care = Usual Care
- Pre-Enrollment Failure of Non-Operative Care in >70% of Patients
- Biases of Treating Physician
- Patient Pre-Treatment Expectation
Who Should “(Could)” Have Surgery for an Intervertebral Disc Herniation

A Pearson, et al, SPINE, Vol. 37

Epidural Steroid Injections are Associated with Less Improvement in Patients with Lumbar Spinal Stenosis: A Subgroup Analysis of the Spine Patient Outcomes Research Trial

K Radcliff, et al, SPINE, Vol. 38

SPORT Randomized Trial

Surgery vs. “Usual” Disorganized, Inefficient, Hypo-Effective Care

• Who Should Have Surgery?
• Surgery is Superior to Non-Operative Care

“I Am Free of All Prejudice. I Hate Everyone Equally”

W.C. Fields
Every Man Has A Perfect Right to His Opinion, Provided it Agrees with Ours

*Josh Billings*