The Facts About Back Pain

Kevin Cuccaro, D.O.
Who am I?

- Anesthesiologist
- Fellowship trained Pain Physician
- Group practice Navy
- Solo practice
- Fall of 2012
Outline

• Definitions, Epidemiology & Risk Factors
• Evidence & Interests
• Management
International Association for the Study of Pain

“Pain is an unpleasant sensory & emotional experience associated with actual or potential tissue damage or described in terms of such damage"
What are we treating?

Unpleasant

Sensory AND Emotional Experience
Low Back Pain

Pain below the rib margin & above the thighs
with or without “sciatica”
Low Back Pain

“Non-specific” or “Axial”

“Radicular”
Outline

- Definitions, **Epidemiology** & Risk Factors
- Evidence & Interests
- Management
Epidemiology

• 2nd Most common reason for ALL physician visits

• Total costs > $100 BILLION per year

• Most frequent Worker’s Compensation claim

• Most common reason for early Social Security Disability for those < 45 years of age
Epidemiology

- Lifetime prevalence of 60 – 90%
- Industrialized & developing world
- Disability rates very different
Outline

• Definitions, Epidemiology & **Risk Factors**
• Evidence & Interests
• Management
Risk Factors

- Genes
- Individual Risk Factors
- Psychosocial
- Environment
Risk Factors

Biomechanical
- Weight lifting, lift rate, load position, reach, asymmetry, vibration

Psychosocial
- Mental concentration or demand, job responsibility, lack of variety, job satisfaction, mental stress

Personal
- Physical strength, genetics, gender, personality
Risk Factors

• Back pain beliefs
• Unemployment
• Pain Intensity
Risk Factors

• Maladaptive coping
• Nonorganic signs
• High baseline impairment
• Psychiatric comorbidities
Outline

• Definitions, Epidemiology & Risk Factors

• Evidence & Interests

• Selection & Management
Who has an interest in this?

- Alliance of State Pain Initiatives
- American Academy of Pain Management
- American Academy of Pain Medicine (AAPM)
- American Academy of Interventional Spine Specialists (AAISS)
- American Academy of Spine Physicians (AASP)
- American Academy of Spine Specialists (AAOSS)
- American Association of Pain Management in Ultrasound (AAPMU)
- American Back Society (ABS)
- American Headache Society (AHS)
- American Pain Society (APS)
- American Society of Regional Anesthesia & Pain Medicine
- American Society of Interventional Pain Physicians
- American Society of Pain Educators (ASPE)
- American Society of Pain Management Nursing (ASPMN)
- International Association for the Study of Pain (IASP)
- International Intradiscal Therapy Society
- International Myopain Society
- International Neuromodulation Society
- International Spine Intervention Society (ISIS)
- National Association of Spine Specialists
- North American Spine Society
- National Pain Education Council
- North American Neuromodulation Society (NANS)
- Opioid Management Society
- Pain Relief Foundation
- Physiatric Association of Spine, Sports & Occupational Rehabilitation (PASSOR)
- Society of Pain Practice Management (SPPM)
- World Institute of Pain (WIP)
- World Society of Pain Clinicians
Who has an interest in this?

- Back Pain Costs >$100 BILLION year
- Increased Procedures 130-700%
- Increased Surgeries 300+%
Long-Term Opioid Therapy Reconsidered

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Group Health Research Institute, Seattle, Washington, Marquardt Medical Center, New York, and Oregon Health & Science University and Kaiser Permanente Center for Health Research, Portland, Oregon

Abstract

In the past 20 years, primary care physicians have greatly increased prescribing of long-term opioid therapy. However, the rise in opioid prescribing has outpaced the evidence regarding this practice. Increased opioid availability has been accompanied by an epidemic of opioid abuse and overdose. The rate of opioid addiction among patients receiving long-term opioid therapy remains unclear, but research suggests that opioid misuse is not rare. Recent studies report increased risks for serious adverse events, including fractures, cardiovascular events, and bowel obstruction, although further research on medical risks is needed. New data indicate that opioid-related risks may vary with dose. From a societal perspective, higher-dose regimens account for the majority of opioids dispensed, so caution dosing may reduce both diversion potential and patient risks for adverse effects. Limiting long-term opioid therapy to patients for whom it provides notable benefits could also reduce costs. Given the warning signals and knowledge gaps, greater caution and selectivity are needed in prescribing long-term opioid therapy. Until stronger evidence becomes available, clinicians should err on the side of caution when considering this treatment for chronic pain.

For two decades, opioid therapy for chronic noncancer pain has been contentious and controversial. But the opioid epidemic has added a new layer of complexity and urgency to this debate. The question now is not whether opioids should be used at all, but how they should be used to minimize harm and maximize benefit. This issue is not just a medical question, but a public health issue as well. The Centers for Disease Control and Prevention (CDC) has issued guidelines for the safe use of opioids, and these guidelines have been endorsed by professional organizations such as the American Pain Society and the American Academy of Pain Medicine. However, these guidelines have been met with resistance by some physicians, who argue that they undervalue the benefits of opioids for certain patients. It is clear that more research is needed to better understand the risks and benefits of long-term opioid therapy, and to develop evidence-based guidelines that can guide clinical practice.
Outline

• Definitions, Epidemiology & Risk Factors
• Evidence & Interests
• Management
# The Challenges of Treatment

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<th>Challenges</th>
<th>Goal</th>
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<tr>
<td>Subjective Experience</td>
<td>Objectively Quantify &amp; Treat</td>
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<td>Psychosocial Risk Factors</td>
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<td>Outside Influencers &amp; Dogma</td>
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Two Goals of Treatment

Improve Function

Do NO Harm
Three “Key” Questions

- Suspicion of Serious Systemic Disease?
- Neurologic Compromise on exam?
- What Psychosocial Stressors are present?
Systemic Disease

• Cancer
  – >50 yo
  – Breast, Lung, Prostate, Kidney, Thyroid
  – Unexplained Weight Loss, Pain > 1 month & failure to improve
Systemic Disease

• Infection
  – Immune compromised, Steroids
  – IVDA
  – Fever
  – Concurrent infection/indwelling catheter
Systemic Disease

• Spondyloarthropathy
  – A.M. Stiffness, improves with exercise, younger

• Compression FX
  – Osteoporosis
  – Older and/or steroid use

• Neuromuscular disease
  – Progressive motor weakness, history, polyneuropathy
Neurologic Compromise

• Cauda Equina
  – Urinary Retention > Incontinence
  – Bowel Incontinence, loss of sphincter tone
  – Saddle Anesthesia
  – Profound bilateral leg weakness
Neurologic Compromise

• Radiculopathy

  – OBJECTIVE signs
    • WEAKNESS
    • Loss of reflex
    • Loss of sensation

  – Atrophy
Psychosocial Stressors

• Depression and/or Anxiety
• Job Dissatisfaction
• Litigation/Compensation
• Passive Coping
• Pain Beliefs
Acute Back Pain

• Majority of Acute Low Back Pain can be managed conservatively
• Imaging is usually NOT indicated
• Imaging to RULE OUT...not rule in
• Focus on Function
Treatment of Acute Back Pain

- Maintenance or promotion of activity
- Bed Rest = Bad
- Reassurance
- Medication to promote function
Chronic Back Pain

- Very few guidelines
- Not an entity but a SYMPTOM
- “What are you treating?”
- Do No Harm
Chronic Back Pain

- Longer the duration, the more resistant to therapy
- No ‘Magic Bullets’
- Encouragement, activity & exercise
Chronic Back Pain

- Quit Smoking
- Movement/Exercise
- Diet/Nutrition
- Reassurance, coping strategies, CBT
Procedures for Back Pain
Procedures for Back Pain

• VERY little evidence supports use
• Conflicting Society Guidelines
• Medicare & Insurers
## Guidelines

<table>
<thead>
<tr>
<th>APS/ACP</th>
<th>ASA/ASRA/ISIS/ASIPP</th>
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<tbody>
<tr>
<td>• IA Blocks – No</td>
<td>• IA Blocks – Yes</td>
</tr>
<tr>
<td>• RFA – No</td>
<td>• RFA – Yes</td>
</tr>
<tr>
<td>• Intradiscal – No</td>
<td>• Intradiscal – Maybe/Yes</td>
</tr>
<tr>
<td>• Epidural – Limited</td>
<td>• Epidural – Yes</td>
</tr>
<tr>
<td>• Third Party</td>
<td>• Involved Party</td>
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Selection & Management

Focal

Multifocal
Multifocal Pain
Axial  
Radicular
Selection & Management

- Focal
- Functional Impairment
- Amenable to interventions

- Favorable?
- Endpoint?
Modifiers

- Psychosocial stressors
- Workers Compensation
- Disability
- Litigation
Spine Procedures

Axial

• Facet/Medial Branch Blocks
• Sacroiliac Joint Injections
• Intradiscal Therapies

Radicular

• Epidural Steroid Injections
Radicular Pain
Radicular Pain
Axial Back Pain
Zygapophyseal Joints

Typical medial branch contrast flow with declined oblique fluoroscopic placement

At L4, this initial needle placement is slightly anterior with contrast outlining the medial branch in lateral view with superior division also opacified, but the oblique view shows predominantly intermediate branch opacification. There is no proximal contrast flow along the somatic root. The needle at L4 was later withdrawn slightly in order to obtain fully satisfactory opacification of the medial branch (not shown). The L5 dorsal ramus is satisfactorily outlined.
Radiofrequency Ablation
Treatment of Spine Pain
Intervertebral Discs
Treatment of Spine Pain
Treatment of Spine Pain
Spinal Cord Stimulation
Important Consideration

Needs of the Many vs Needs of the Few
“While meeting the needs of individual patients, physicians are required to provide health care that is based on the wise and cost-effective management of limited clinical resources. The physician’s professional responsibility for appropriate allocation of resources requires scrupulous avoidance of superfluous tests and procedures. The provision of unnecessary services not only exposes patients to avoidable harm and expense but also diminishes the resources available for others.”