Management of musculoskeletal pain in ESKD

Pain Management in patients with ESKD – SGH Symposium 2016

Outline of talk

- 1. Osteoarthritis including back pain
- 2. Painful shoulders
- 3. Gout – acute and chronic

- Potential areas of controversy
  - Opioids
  - Placebos

There will be stories "Let's look under the clock".

Osteoarthritis including back pain

- Key Points
  - Poor correlation between radiology and symptoms
  - Many treatments are recommended on the basis of short term trials of efficacy
  - Adverse effects are chronic and commulative
  - Non-pharmacological treatments are nearly always to be preferred to drugs

Back Pain

- Distinguish between
  - benign back pain (This is the hard one)
  - back pain with red flags,
  - spinal canal stenosis,
  - sciatica,
  - back pain that isn't back pain

Back Pain with red flags

- Sudden onset
  - vertebral crush fractures
  - Usually not when doing something, can wake with pain
  - Evidence currently says vertebroplasty doesn't work any better than placebo
- Unwell, fevers, night sweats
  - Discitis/vertebral osteomyelitis has subacute to chronic onset. Common in ESKD
- Nocturnal, gradually worsening, cancer history
  - Prostate and breast cancer, myeloma

Spinal canal stenosis

- Back pain radiating into buttocks and legs with walking
- "Neurogenic claudication"
- Relief by forward flexion
- Have to be specific - where is the pain, does it go into your legs
- Good evidence for epidural steroids if true lumbar canal stenosis
- "small" decompressive laminectomies can be effective and safe

Sciatica

- Have to ask patient - does pain go into the leg?
- In the elderly signs such as straight leg raising are not as reliable as in the younger patients with disc bulges and protrusions
- CT-guided nerve root injections by experienced radiologists are effective
- I'm unaware of any evidence for pregabalin (but *everyone* is on it)
- Several trials in progress - one through George Institute, Sydney

Back pain that isn't back pain

- Loin pain - perhaps kidney, perhaps referred from thoracic facet joint
- Lateral rib impaction - more common with lateral ribs on iliac crest
- Sacral pain - sacral insufficiency fractures, metastases
- Coccyx pain - hardly ever find a cause
- Lower thoracic/upper lumbar pain referred from abdomen - eg AAA

"Benign Back Pain"

- Exercise is the best treatment
  - Core muscle strengthening - start with supervised exercise
- Lumbar support elasticised belt - not a rigid brace
- Parcetamol - safe but not very effective with chronic use
- NSAIDs - contraindicated in most people (not just the ESKDs)
- Interventions like facet joint injections are, on average, ineffective
- Cervical facet joint injections have some evidence

Osteoarthritis of knees and hips

- Exercise, Physiotherapy, Taping
- Orthotics/Braces
- Topical agents
- Paracetamol
- Injections - steroids and hyalurons
- NSAIDs
- Glucosamine/chondroitin
- Opioids

Physical treatments for OA knee & hip Exercise, physiotherapy, taping

- Exercise
  - Fitness such as walking, stationary bike, treadmill - all proven
  - Exercise and diet to reduce weight even more effective
  - Resistance eg quadriceps strengthening - very effective
- Physiotherapy
  - Self management classes and supervised exercise - proven
- Taping
  - Very effective. 73% improve with therapeutic taping, 49% with control taping, 10% with no taping. Presumably working by reducing patellofemoral pain

Orthotics and braces

- Very rarely useful
- Expensive, usually discarded
- Comfortable walking shoes just as effective as custom-made orthotics to "unload" medical compartment
- Knee braces uncomfortable and always discarded

Topical agents for OA knee

- Underutilised
- Topical capsaicin - reported effectiveness, I have never used
- Topical "Deepheat" agents - not persisted with long term
- Topical Voltaren
  - Trials over 2-4 weeks - 40% of active agent patients improve 50%, 20% of inert agent patients improve
  - Trials over 8-12 weeks - 60% of active agent patients improve, 50% of inert agent patients improve

Paracetamol for chronic OA

- Placebo-controlled trials indicate minimal long-term effectiveness eg 4 units on a 0-100 VAS
- Illustrates fluctuating nature of pain in OA knee
- Has changed my practice - less use of long term Panadol, more short term use and encouragement to exercise
- At 4000mg per day, high incidence of elevated LFTs

NSAIDs for OA

- Effective, esp. Voltaren 50mg tds, but short and long-term toxicity makes it rarely usuable - never in ESKD
- We must avoid another drug orgy like the 1990s NSAID epidemic
  - (Or are we in a storm of them already - vitamin D, PPIs, gabapentin and pregabalin, oxycontin)

Intra-articular injection for OA

- IA injections of steroid more effective pain relief than placebo injections
  - 44% improve >20mm on 0-100 mm VAS
- In some trials, IA hyaluronic acid is more effective than IA steroids
  - (22mm on 0-100mm VAS at 8 weeks)
- Why aren't HA/Synvisc injections used more often in Australia?
  - Early protocol required 4 injections at weekly intervals
  - About 1:20 have an inflammatory reaction
  - Not funded - funding agents consider not cost-effective

Glucosamine and chondroitin Fish Oil

- Minimal effect of the combination on joint space narrowing, compared to placebo or individual components - difference is trivial
- All groups had equivalent reduced pain over 2 years - including placebo group
- High dose fish oil (4.5gm omega3 fatty acids) was ***less*** effective than low dose (0.45gm) over a 24 month OA knee trial

Opioids, gabapentin, pregabalin

- Like most rheumatologists I swallowed the "opioids are safe for non-malignant pain" Kool-Aid.
- May be safe for periods of weeks
- Long term – benefit is small, toxicity is large
- I now emphasise the side-effects and try never to start narcotics
- So far I've never prescribed Palexia/tapentadol
  - 12 week trial – 50% improvement in 32% of Palexia-treated patients, 24% of placebo-treated patients and 17% of oxycodone-treated patients
  - I'll wait for long term results and toxicity
- No evidence for gabapentin or pregabalin in OA

Shoulder Pain

- Shoulder pain is very common with aging, and more common in ESKD
- Mostly rotator cuff degeneration
- Less often
  - osteoarthritis of the glenohumeral or acrominoclavicular joint
  - Cuff tear arthropathy/ Milwaukee shoulder
  - Acute and chronic gout
  - Beta2 macroglobulin amyloid (dialysis)
  - Referred from neck or chest

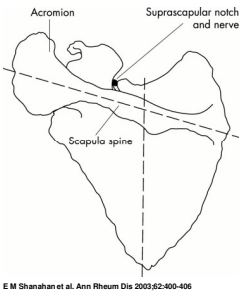
Rotator Cuff Degeneration

- Tendonosis, tendon tears, subacromial bursitis, impingement syndrome – regard as a spectrum of conditions with same treatment
- ***Exercise/physiotherapy is the best long term treatment for rotator cuff degeneration***
- Aim is to stabilise the humeral head against the glenoid, preventing riding up of the humeral head with abduction
- Steroid injections into subacromial space reduce pain and inflammation. Stopping the pain encourages restoration of normal scapulohumeral motion. Problem will recur unless stabilisers – subscapularis, infraspinatus and teres minor – are strong and functioning

Glenohumeral OA

- More difficult to manage
- Glenohumeral joint injections some help
- Short courses of paracetamol for exacerbations
- Avoid opioids, Tramal, Lyrica
- Suprascapular nerve block is proven to be effective in painful shoulders
  - Experienced practitioners do it blind, I get Carl Bryant to do it.

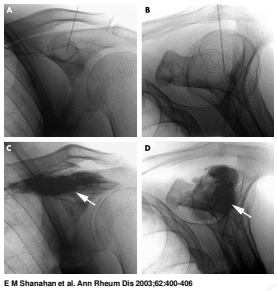
Method of suprascapular nerve injection by identification of surface anatomy.



E M Shanahan et al. Ann Rheum Dis 2003;62:400-406

ARD

Fluoroscopic image of the suprascapular nerve block injection.



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Gout

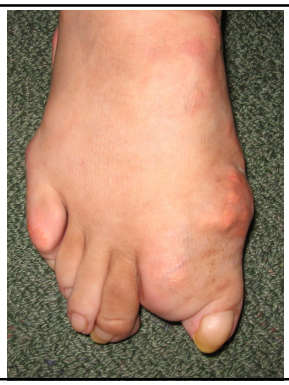
- Good progress in treatment of gout
  - One new drug
  - Mostly a better approach using traditional drugs

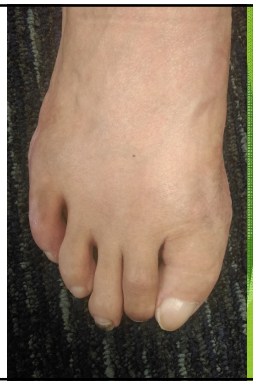
Acute gouty arthritis

- Can't use NSAIDs in CKD. Rarely get to use NSAIDs in hospital patients
- Change in colchicine protocol
  - 2 0.5mg tablets stat and one an hour later, then one BD
  - Never given as one every hour until benefit or diarrhoea
- More use of oral prednisolone
  - Trial used 35mg prednisolone/day (25mg/day may be enough)
- Intraarticular steroids
  - Fastest treatment if one or two accessible joints

Recurrent or tophaceous gout

- More acceptance that allopurinol is safe in renal failure if used carefully
- Allopurinol has been underdosed until recently because of fear of allopurinol hypersensitivity syndrome (AHS)
- AHS probably is more common in patients with CKD but still rare
- AHS is idiosyncratic - not dose dependent
- Start with low dose (50-100mg/day) and increase slowly with steroid cover
- Treat to target - serum urate <0.35
- Patients without CKD can go to 900mg/day
- Patients with CKD - upper limit uncertain, I have patients on 450mg/day
- I genotype Asian patients and don't give allopurinol to those who are HLA-B 5801
- Febuxostat offers an alternative in allopurinol-sensitive patients





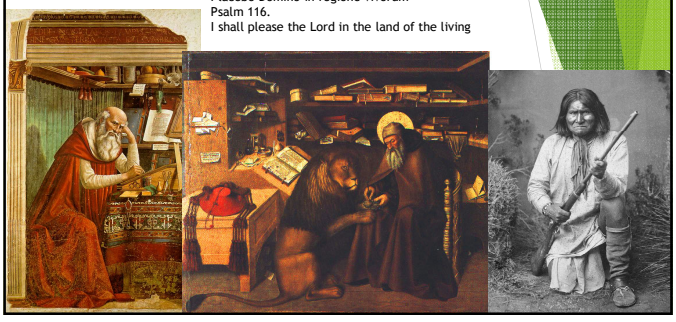
Do we have safe and potent analgesics for chronic use?

- NO!
- We do our best with what we have and add our selves

PLACEBO

St Jerome or Geronimo

Placebo Domino in regione vivorum
Psalm 116.
I shall please the Lord in the land of the living



A word on Placebos

- I think many of our treatments rely on the placebo effect
- Truism - the experience of pain is strongly influenced by emotion
- A patient who is listened to, takes part in decisions, understands the goals of treatment does better
- What, or who, is the most powerful placebo in this room?

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- What, or who, is the most powerful placebo in this room?
- Dr Frank Brennan!

What is the molecular formula of yominium sulphide?
What is the electron configuration of gadolinium
How do you feel?