

# Pain management following Hip fracture

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# Introduction

- Osteoporosis and Hip fracture
- BSUH Service
- NHFD
- NICE 124
- Guidelines for older people
- Analgesia
- Any questions?

# Osteoporosis and Hip #

- Most common bone disease
- 300,000 fragility fractures/year
- # Wrist, hip and vertebra, but also now humerus and peri-prosthesis?
- Hip #: 10% increase between 2015 - 2020
- Incidence rising with ageing population
- Increasing numbers of men
- Plenty of options, yet often left untreated

# Our Service

- Split site Teaching Hospital
- Hot site: Inner city by the sea
  - Poor access/over-crowded (A and E / space)
- Rehabilitation in the country
- 1.5 WTE Orthogeriatricians (plus a bit more)
- Daily input to hot site, plus weekend help from on-call Geriatric colleagues
- Orthogeriatric rehabilitation ward: 3 weekly ward rounds (two by an Orthogeriatrician) and MDM
- More Consultant input than General Geriatric patients

# Service based on Blue Book

(BGS and BOA)

- Admitted to an Orthopaedic ward within 4 hours
- Those medically fit operated on within 48 hours  
(36 hours: BPT)
- All assessed for pressure area damage
- All admitted to an Orthopaedic ward with routine access to Orthogeriatrics
- All offered treatment to reduce risk of further fracture
- All offered a falls assessment and intervention

# Bluebook Average Times

| Hours                 | Local | SHA  | National |
|-----------------------|-------|------|----------|
| Time to ward (hrs)    | 6.9   | 8.8  | 9.2      |
| Time to theatre (hrs) | 22.1  | 26.3 | 30.9     |

# Waterlow score

- Thin 85 year old lady:
  - Female = 2
  - BMI < 20 = 3
  - Incontinent = 1
  - Red skin = 2
  - 81 + years = 5
  - Eating poorly = 1
  - Diabetes = 4
  - Orthopaedic = 5
- Total: 23 points
- High Risk = Pressure relieving mattress

# Bluebook indicators

| %                       | Local | SHA  | National |
|-------------------------|-------|------|----------|
| Pressure ulcers         | 2.1   | 2.9  | 2.7      |
| Preoperative assessment | 47.4  | 68.2 | 71.3     |
| Bone protection         | 97.3  | 98.1 | 94.9     |
| Falls assessment        | 96.9  | 98.4 | 93.7     |



# Earlier Geriatric Intervention

- Pre-operative assessment and optimisation
- Analgesia
- Mattress
- Pharmaceutical review:
  - More often about stopping inappropriate drugs  
Beers (1991, 2012) and Stopp-Start (2008)
  - Diuretics/Antihypertensives withheld
  - Alcohol withdrawal
  - Anti-cholinergic burden
  - PD drugs on time
- Communication: patient and family

# Admitted from:

| %                | Local | SHA  | National |
|------------------|-------|------|----------|
| Own home         | 80.2  | 78.2 | 77.4     |
| Residential care | 10.0  | 10.3 | 11.0     |
| Nursing care     | 7.7   | 8.4  | 7.6      |
| Hospital         | 1.9   | 2.1  | 2.9      |

# ASA grade

| %         | Local | SHA  | National |
|-----------|-------|------|----------|
| 1 Healthy | 5.9   | 3.1  | 2.5      |
| 2 Mild    | 24.1  | 31.5 | 26.9     |
| 3+        | 69.9  | 64.0 | 65.7     |

# Age

| %        | Local | SHA  | National |
|----------|-------|------|----------|
| Under 60 | 3.1   | 1.9  | 2.4      |
| 60-70    | 8.2   | 7.6  | 8.7      |
| 70-80    | 17.8  | 19.7 | 21.3     |
| 80-90    | 46.8  | 47.3 | 45.9     |
| 90+      | 24.1  | 23.5 | 21.7     |

# Walking

| %                        | Local | SHA  | National |
|--------------------------|-------|------|----------|
| Without aid              | 49.3  | 49.1 | 48.0     |
| Walking one aid          | 19.8  | 22.8 | 23.2     |
| Walking two aids / frame | 26.9  | 25.4 | 24.4     |

# Type of Anaesthesia

| %                      | Local | SHA  | National |
|------------------------|-------|------|----------|
| GA plus                | 21.6  | 46.0 | 54.8     |
| SA only                | 52.4  | 46.8 | 31.7     |
| SA +<br>nerve<br>block | 26.0  | 6.8  | 11.7     |

# National Hip Fracture Database

|                  | Local | SHA  | National |
|------------------|-------|------|----------|
| Total            | 523   | 5911 | 65383    |
| 30 day mortality | 4.6%  | 6.2% | 6.2%     |
| LOS (Days)       | 16.9  | 18.2 | 19.7     |

# Pain: Why treat?

- Dignity and right to pain relief
- Patient comfort and satisfaction
- Facilitates recovery and functional ability
- Reduce morbidity
- Promote rapid discharge from hospital



# Inadequate Pain management

- Mustn't give old people strong analgesics
- All addictive
- Older people more reluctant to report pain, part of ageing
- Don't vocalise it, don't have it: hypo-active delirium
- Poorly assessed: those with cognitive impairment
- Mode of delivery in Delirium/Dementia
  
- Contributes to post op morbidity
  - Delirium
  - Cardio respiratory complications
  - Failure to mobilise

# NICE 124: Hip Fracture

- Assess pain:
  - Immediately on presentation
  - Within 30 minutes
  - Hourly
  - Regularly
- How?
  - Visual Analogue Score

# NICE II

- Include those with cognitive impairment
  - Often given less analgesia
- Ensure early and sufficient analgesia to allow movement before X-ray
- Paracetamol: 6 hourly unless contra-indicated, both pre and post
- Additional opioids
- +/- nerve block (although no substitute for early surgery)

# Guidelines: Peri-operative care of the elderly 2014

- The role of emergency services:
  - Fluid resuscitation / warming
  - Immobilisation
  - Traction (no evidence: SIGN)
  - Information gathering (NOK, DNAR, PMH)
- Entonox and Paracetamol
- Titrated IV opiates
  - Dose and timing documented to minimise overdose
  - Start low, go slow
- Avoid NSAIDs

# Pain in the cognitively impaired

Warden 2003

- PAINAD scale?
  - Breathing
  - Negative vocalisation
  - Facial expression
  - Body language
  - Consolability
- Might overestimate pain
- Tachycardia / hypertension
- Increased confusion

# Our Aims

- Non-drug options
- Pre-emptive analgesia
- Multi-modal options/delivery
  - Alternatives to oral formulations

# Other pains

- Constipation
- Retention of urine
  - Both can be cause of postoperative delirium
- Pressure area damage: Relieving mattress
- Positioning
- Warming
- Nutrition
- Anxiety (patient and family)
- Depression

# Factors influencing Drugs

Underlying co-morbidities include:

- Frailty
- Chronic pain syndromes (already on opiates)
- CKD +/- AKI
- Generalised Osteoarthritis
- Parkinson's Disease (on time)
- Other neurological problems
- Neuropathic pain



# Special drugs

- PMR: Prednisolone
- Gout: Colchicine
- OA: Topical NSAIDs
- Vertebral #: SC Calcitonin

# Our drugs

- Paracetamol oral/IV
- Oramorph unless CKD
- BuTrans Patches
- Pregabalin/Gabapentin
  
- Nerve blocks: reduce postoperative opioid requirements

# Gabapentin

- Similar strength to COX 2 Inhibition
  - Ca<sup>++</sup> and Na<sup>+</sup> channel blocking
  - Ascending and descending pathways
- In spinal surgery:
  - 1200mg reduced early post operative pain and decreased morphine requirements (Turan)
- In tibial surgery:
  - No side effects and pain score at 2 hours significantly reduced (Khali 2011)

# Butrans patches

## Positives:

- Lower pill burden
- Few side effects
- Steady state
- Background
- Weekly
- Don't have to ask
- Safe in renal disease and the elderly

## Negatives:

- Difficult to titrate dose
- Side effects in some
- Don't stay on
- Do stay on!

# Not to use:

- NSAIDS:
  - Gastric irritation and bleeding
  - Fluid retention and exacerbation of heart failure
  - Hypertension
  - Acute Kidney Injury or worsening of CKD
- Codeine / Tramadol:
  - Constipation
  - Urinary retention
  - Loss of appetite
  - Nausea
  - Sedation
  - Significant effect on memory
  - Failure to engage with therapy

# We've made changes:

- Consultant delivered (Orthogeriatrics)
- Dedicated lists
- Pressure area care / mattresses
- Plan to be all on one site by the end of this year

# How can we do better?

- Cubicle in A and E v. Straight to recovery
- NOF bleep.....it's an emergency
- Team: Consultant or Senior Nurse led?
- Early radiography
  - MRI for those where doubt exists (often delay)
- Fast track admission to ward
  - SIGN suggest within 2 hours
- Pre-operative assessment
- Warfarin bridging
- Discharge planning / D2A / Community units

# Other groups?

'Why is my care different?'

Anon (who has a peri-prosthetic fracture)



# Thank you

- Any Questions?

# Sources

- SIGN
- NHFD
- Blue book
- Guidelines:
  - Peri-operative care of the elderly 2014  
(R. Griffiths et al)
  - Management of proximal femoral fractures 2011  
(R. Griffiths et al)
- Assessing pain in Older Adults with Dementia  
(Horgas)