Anaesthesia for THR and TKR

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How to choose

- Intraoperative techniques
  - GA, Spinal, Epidural, Peripheral nerve block
  - Factors affecting choice
- Postoperative analgesia
  - Difference between THR and TKR
  - Evidence for efficacy
  - Risks
Intraop

- Patient factors
- Anaesthesitist factors
- Surgeon factors
Patient Factors

- **GA**
  - Patient preference
  - Long op, other pain, anxiety, CVS instability, can’t lie flat
  - CI to RA
- **RA**
  - Avoid GA, patient preference
  - Reduced PONV, reduced airway problems, reduced resp. depression
  - Improved pain relief postop, less opioid use
  - Reduce bleeding, ? DVT
  - e.g. obesity, COPD, predicted airway problems (AS)
• **Anaesthetist factors**
  - Skills and expertise,
  - preference

• **Surgeon factors**
  - Duration,
  - trainee,
  - predicted difficulties (bleeding),
  - ?preference
## Prospect Group - [www.postoppain.org](http://www.postoppain.org)

- Evidence based recommendations

<table>
<thead>
<tr>
<th>Intraop</th>
<th>GA alone</th>
<th>GA + PNB</th>
<th>Spinal +/-GA</th>
<th>Epidural +/- GA</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>opioids</td>
<td>FNB or LPB</td>
<td>Single shot LA + opioid</td>
<td>LA + opioid</td>
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<tr>
<td>Postop</td>
<td>P + NSAID</td>
<td>P + NSAID</td>
<td>P + NSAID</td>
<td>P + NSAID</td>
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<tr>
<td>+</td>
<td>IV PCA</td>
<td>Cont PNB + rescue opioids</td>
<td>Rescue opioids</td>
<td>PCEA or cont infusion + rescue opioids</td>
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</tbody>
</table>
Prospect recommendations

<table>
<thead>
<tr>
<th>Intraop technique</th>
<th>GA + FNB</th>
<th>Spinal + opioid + FNB</th>
<th>Spinal + opioid</th>
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</thead>
<tbody>
<tr>
<td>Postop analgesia</td>
<td>P + NSAID + opioids</td>
<td>P + NSAID + opioids</td>
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- Severe pain = strong opioids
- Mod to mild pain = weak opioids
- Little evidence for intra-articular drugs, TENS
- Reasonable evidence for cooling and compression
Risks / Benefits of RA

- **BMJ 2000 – epidural / spinal across specialties**
  - 30% reduction in mortality
  - 44% reduction in DVT, 55% PE
  - 39% reduction pneumonia, 59% resp. depression

- **BJA 2009 – national audit complications**
  - 2 - 4.2 : 100,000 risk permanent injury (61% got better)
  - 0.7 – 1.8 : 100,000 risk paraplegia or death
  - Epidurals worse than spinals, ?CSEs
PNB

- Risks PNB less than central blocks
- Unilateral
- No direct urinary retention
- Motor Block
- Failure rate
- Unpredictable duration
- No real evidence that are better for rehab
Salisbury’s data for TKR

- Regular audit of mobilisation success on day 1
  - Last 2008 – epi 60%, PNB 69%, neither 100% = yes
  - *But* inadequate pain relief in 30% epi, 54% PNB and 100% neither
  - Repeated 2009, reasons - hypotension, pain, nausea, motor block
- Standardised protocol
TKR anaesthetic package

- Spinal LA + diamorphine
- Sedation or GA
- FNB – 20mls 0.125% bupivacaine
- IV PCA
- P + NSAID (or tramadol if NSAID CI)
- Ondansetron
- Colloid IVI