

Author(s):

Date: 2018-06-20

Question: Should Regional vs. General anesthesia vs Regional vs. General anesthesia be used in Hip fractures geriatric patients (≥ 60 years old)?

Settings: Different anesthesia technique

Bibliography: Cochrane Database of Systematic Reviews

| Quality assessment | | | | | | | No of patients | | Effect | | Quality | Importance |
|------------------------------|-----------------------|-------------------------|--------------------------|-------------------------|------------------------|--|---------------------------------|---------------------------------|------------------------|---|---------------|------------|
| No of studies | Design | Risk of bias | Inconsistency | Indirectness | Imprecision | Other considerations | Regional vs. General anesthesia | Regional vs. General anesthesia | Relative (95% CI) | Absolute | | |
| 30-day mortality | | | | | | | | | | | | |
| 5 | observational studies | no serious risk of bias | serious ¹ | no serious indirectness | no serious imprecision | strong association ² increased effect for RR ~1 ³ | 2073/25725 (8.1%) | 1987/20336 (9.8%) | OR 0.96 (0.86 to 1.08) | 4 fewer per 1000 (from 13 fewer to 7 more) | ⊕⊕⊕○ MODERATE | CRITICAL |
| | | | | | | | | 7.3% | | 3 fewer per 1000 (from 10 fewer to 5 more) | | |
| 30-day mortality | | | | | | | | | | | | |
| 1 | randomised trials | serious ⁴ | no serious inconsistency | no serious indirectness | no serious imprecision | none | 1/28 (3.6%) | 1/15 (6.7%) | OR 0.52 (0.03 to 8.93) | 31 fewer per 1000 (from 65 fewer to 323 more) | ⊕⊕⊕○ MODERATE | IMPORTANT |
| | | | | | | | | 0% | | - | | |
| in-hospital mortality | | | | | | | | | | | | |
| 5 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | strong association ² increased effect for RR ~1 ³ | 2708/68993 (3.9%) | 1916/64306 (3%) | OR 1.21 (1.14 to 1.28) | 6 more per 1000 (from 4 more to 8 more) | ⊕⊕⊕⊕ HIGH | CRITICAL |
| | | | | | | | | 2.1% | | 4 more per 1000 (from 3 more to 6 more) | | |

¹ The sample content varies greatly

² this is a big sample

³ use the propensity score matching to reduce select bias

⁴ It's not clear what the random allocation is

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| Quality assessment | | | | | | | No of patients | | Effect | | Quality | Importance |
|----------------------------------|-----------------------|-------------------------|--------------------------|-------------------------|------------------------|---|---------------------------------|---------------------------------|------------------------|---|---------------|------------|
| No of studies | Design | Risk of bias | Inconsistency | Indirectness | Imprecision | Other considerations | Regional vs. General anesthesia | Regional vs. General anesthesia | Relative (95% CI) | Absolute | | |
| pneumonia | | | | | | | | | | | | |
| 5 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | strong association ¹ | 2107/32073 (6.6%) | 1785/24638 (7.2%) | OR 0.99 (0.91 to 1.07) | 1 fewer per 1000 (from 6 fewer to 5 more) | ⊕⊕⊕○ MODERATE | IMPORTANT |
| | | | | | | | | 4.2% | | 0 fewer per 1000 (from 4 fewer to 3 more) | | |
| acute respiratory failure | | | | | | | | | | | | |
| 3 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | increased effect for RR ~1 ² | 877/52278 (1.7%) | 336/52330 (0.6%) | OR 2.66 (2.34 to 3.02) | 10 more per 1000 (from 8 more to 13 more) | ⊕⊕⊕○ MODERATE | IMPORTANT |
| | | | | | | | | 0.6% | | 10 more per 1000 (from 8 more to 13 more) | | |

| | | | | | | | | | | | | | |
|------------------------------------|-----------------------|--------------------------------------|--------------------------|-------------------------|------------------------|---|-------------------|-------------------|-------------------------|---|------------------|---------------|--|
| | | | | | | | | | | | more to 12 more) | | |
| acute renal failure | | | | | | | | | | | | | |
| 4 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | none | 111/59531 (0.2%) | 70/54919 (0.1%) | OR 1.32 (0.98 to 1.79) | 0 more per 1000 (from 0 fewer to 1 more) | ⊕⊕⊕⊕ LOW | IMPORTANT | |
| | | | | | | | | 0.8% | | 3 more per 1000 (from 0 fewer to 6 more) | | | |
| heart failure | | | | | | | | | | | | | |
| 1 | randomised trials | serious ³ | no serious inconsistency | no serious indirectness | no serious imprecision | none ² | 4/28 (14.3%) | 1/15 (6.7%) | OR 2.33 (0.24 to 23) | 76 more per 1000 (from 50 fewer to 555 more) | ⊕⊕⊕⊕ MODERATE | IMPORTANT | |
| | | | | | | | | 0.6% | | 8 more per 1000 (from 5 fewer to 116 more) | | | |
| heart failure | | | | | | | | | | | | | |
| 3 | observational studies | no serious risk of bias ³ | no serious inconsistency | no serious indirectness | no serious imprecision | none ² | 1091/15091 (7.2%) | 1317/15351 (8.6%) | OR 0.98 (0.85 to 1.13) | 2 fewer per 1000 (from 12 fewer to 10 more) | ⊕⊕⊕⊕ LOW | IMPORTANT | |
| | | | | | | | | 0.6% | | 0 fewer per 1000 (from 1 fewer to 1 more) | | | |
| DVE/PE | | | | | | | | | | | | | |
| 2 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | none | 388/16882 (2.3%) | 179/9186 (1.9%) | OR 1.42 (0.84 to 2.38) | 8 more per 1000 (from 3 fewer to 26 more) | ⊕⊕⊕⊕ LOW | IMPORTANT | |
| | | | | | | | | 1.7% | | 7 more per 1000 (from 3 fewer to 23 more) | | | |
| postoperative delirium | | | | | | | | | | | | | |
| 2 | observational studies | no serious risk of bias | serious ⁴ | no serious indirectness | no serious imprecision | none | 1571/6373 (24.7%) | 1115/3297 (33.8%) | OR 1.51 (0.16 to 13.97) | 97 more per 1000 (from 263 fewer to 539 more) | ⊕⊕⊕⊕ VERY LOW | NOT IMPORTANT | |
| | | | | | | | | 18.1% | | 69 more per 1000 (from 147 fewer to 574 more) | | | |
| cerebrovascular accident | | | | | | | | | | | | | |
| 3 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | none | 892/59464 (1.5%) | 740/54801 (1.4%) | OR 1.08 (0.82 to 1.42) | 1 more per 1000 (from 2 fewer to 6 more) | ⊕⊕⊕⊕ LOW | IMPORTANT | |
| | | | | | | | | 0.9% | | 1 more per 1000 (from 2 fewer to 4 more) | | | |
| acute myocardial infarction | | | | | | | | | | | | | |
| 5 | observational studies | no serious | no serious inconsistency | no serious indirectness | no serious imprecision | increased effect for RR ~1 ² | 1314/83978 (1.6%) | 1323/76529 (1.7%) | OR 1.07 (0.99 to 1.16) | 1 more per 1000 (from 0 | ⊕⊕⊕⊕ MODERATE | IMPORTANT | |

| | | | | | | | | | | | | | |
|------------------------------------|-------------------|----------------------|--------------------------|-------------------------|------------------------|-------------------|-------------|-------------|------------------------|---|--|----------|-----------|
| | | risk of bias | | | | | | | | | fewer to 3 more) | | |
| | | | | | | | | 1.9% | | | 1 more per 1000 (from 0 fewer to 3 more) | | |
| acute myocardial infarction | | | | | | | | | | | | | |
| 1 | randomised trials | serious ³ | no serious inconsistency | no serious indirectness | no serious imprecision | none ² | 1/28 (3.6%) | 1/15 (6.7%) | OR 0.52 (0.03 to 8.93) | 31 fewer per 1000 (from 65 fewer to 323 more) | ⊕⊕⊕○ | MODERATE | IMPORTANT |
| | | | | | | | | 0.6% | | 3 fewer per 1000 (from 6 fewer to 45 more) | | | |

¹ this is a big sample

² use the propensity score matching to reduce select bias

³ It's not clear what the random allocation is

⁴ There's a big sample difference

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| Quality assessment | | | | | | | No of patients | | Effect | | Quality | Importance | |
|---|-----------------------|-------------------------|--------------------------|-------------------------|------------------------|---|---------------------------------|---------------------------------|------------------------|---|---------|------------|-----------|
| No of studies | Design | Risk of bias | Inconsistency | Indirectness | Imprecision | Other considerations | Regional vs. General anesthesia | Regional vs. General anesthesia | Relative (95% CI) | Absolute | | | |
| length of hospital stay (Better indicated by lower values) | | | | | | | | | | | | | |
| 4 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | increased effect for RR ~1 ¹ | 61164 | 64390 | - | MD 0.6 lower (2.64 lower to 1.45 higher) | ⊕⊕⊕○ | MODERATE | CRITICAL |
| readmission | | | | | | | | | | | | | |
| 3 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | serious | increased effect for RR ~1 ² | 2842/17117 (16.6%) | 1575/9259 (17%) | OR 1.09 (1.01 to 1.18) | 13 more per 1000 (from 1 more to 25 more) | ⊕⊕○○ | LOW | IMPORTANT |
| | | | | | | | | 20.1% | | 14 more per 1000 (from 2 more to 28 more) | | | |

¹ use the propensity score matching to reduce select bias

² use the propensity score matching to reduce select bias