TITLE: Timing of Hip Fracture Surgery for Non-Elderly Adults: Clinical Effectiveness and Guidelines

DATE: 15 April 2015

RESEARCH QUESTIONS

1. What is the comparative clinical effectiveness of shorter (less than 48 hours) versus longer (48 hours and greater) surgery wait-times for non-elderly hip fracture patients aged 18 to 65?

2. What are the evidence-based guidelines regarding the timing of surgery for non-elderly hip fracture patients aged 18 to 65?

KEY FINDINGS

One systematic review was identified regarding the comparative clinical effectiveness of shorter versus longer surgery wait-times for non-elderly adult hip fracture patients. In addition, one evidence-based guideline regarding the timing of surgery for adult hip fracture patients was identified.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2015, Issue 4), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2005 and April 2, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.
SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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<th>Table 1: Selection Criteria</th>
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<td><strong>Study Designs</strong></td>
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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One systematic review was identified regarding the comparative clinical effectiveness of shorter versus longer surgery wait-times for non-elderly adult hip fracture patients. In addition, one evidence-based guideline regarding the timing of surgery for adult hip fracture patients was identified. No relevant health technology assessments, randomized controlled trials, or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One systematic review\(^1\) was identified regarding the comparative clinical effectiveness of shorter versus longer surgery wait-times for non-elderly adult hip fracture patients. In addition, one evidence-based guideline\(^2\) regarding the timing of surgery for adult hip fracture patients was identified.

The systematic review\(^1\) evaluated the relationship between the hip fracture-to-surgery time interval and the incidence of osteonecrosis of the femoral head (ONFH) in young adults, including a wait-time comparison of less than or more than 48 hours to surgery. The results showed that there was no significant association between varying injury-to-surgery intervals and the post-operative incidence of ONFH in young adults with a hip fracture.

A guideline from the National Institute for Health and Care Excellence\(^2\) (NICE) recommends that surgery for a hip fracture should be performed on the day of patient admission; otherwise...
surgery should be performed the day after admission. Of note, this guideline provides recommendations for the management of hip fractures in all adults over the age of 18; no recommendations specific to adults aged 18 to 65 years were identified.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies
No literature identified.

Guidelines and Recommendations
See: 1.2 Timing of Surgery, pages 10–11

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-analyses

Alternate Definition of Shorter and Longer Wait-Times


Structured abstract: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?AccessionNumber=12004007028

Unclear Population Age


Non-Randomized Studies

Alternate Definition of Shorter and Longer Wait-Times


Non-Comparative Study


PubMed: PM24350142


Unspecified Time to Surgery

Guidelines and Recommendations – Unclear Population Age

   See: Recommendation 21. Time to Surgery, page 64

    See: Effect of delay of surgical correction of hip fractures on mortality, page 14

Review Articles

    PubMed: PM25035822


    PubMed: PM21221220