OP90 Do Patients With Open Fractures Need Urgent Surgery?

AUTHORS:

Matthew D. Mitchell (mdmitchell@uphs.upenn.edu),
Kendal Williams, Samir Mehta, Loriann Fowler-Gagliardi,
Julie Thomas

INTRODUCTION:

Calling in staff and preparing the operating room for an urgent surgical procedure is a significant draw on hospital resources and disrupts care of other patients. It has been common practice to treat open fractures on an urgent basis. HTA methods can be applied to examine this prioritization of care, just like they can be applied to the acquisition of drugs and devices.

METHODS:

Our center completed a rapid systematic review of guidelines, systematic reviews, and primary clinical evidence, on urgent surgical debridement and stabilization of open fractures of long bones ("urgent" being defined as within six hours of the injury) compared to surgical debridement and reduction performed at a later time point. Meta-analyses were performed for infection and non-union outcomes and the GRADE system was used to assess the strength of evidence for each conclusion.

RESULTS:

We found no published clinical guidelines for the urgency of treating open fractures. A good systematic review on the topic was published in 2012. We found six cohort studies published since completion of the earlier review. The summary odds ratio for any infection in patients with later treatment was 0.97 (95% confidence interval (CI) 0.78–1.22, sixteen studies, 3,615 patients) and for deep or "major" infections was 1.00 (95% CI 0.74–1.34, nine studies, 2,013 patients). The summary odds ratio of non-union with later treatment was 0.95 (95% CI 0.65–1.41, six studies, 1,308 patients). There was no significant heterogeneity in any of the results (I-squared = 0 percent) and no apparent trends in the results as a function of study size or publication date. We graded the strength of each of the conclusions as very low because they were based on cohort studies where the treating physician could elect immediate treatment for patients with severe soft-tissue injuries or patients at risk of complications. This raises the risk of spectrum bias.

CONCLUSIONS:

Default urgent scheduling of patients with open fractures for surgical debridement and stabilization does not appear to reduce the risk of infection or fracture non-union. Based on this information, our surgery department managers no longer schedule patients with open fractures for immediate surgery unless there are specific circumstances necessitating it.

. . . .

OP91 Individual Participant Data Meta-Analysis Of Exercise Rehabilitation In Heart Failure

AUTHORS:

Oriana Ciani (O.Ciani@exeter.ac.uk), Sarah Walker,
Fiona Warren, Neil Smart, Massimo Piepoli,
Costantinos Davos, Tim Eames, Rod Taylor

INTRODUCTION:

Traditional meta-analyses synthesize aggregate data obtained from study publications or study authors, such as a treatment effect estimate and its associated uncertainty. An increasingly important approach is the meta-analysis of individual participant data (IPD) where the raw individual-level data are obtained for each study and used for synthesis. This study compares and discusses results from an IPD meta-analysis vs standard meta-analysis of randomized controlled trials of exercise cardiac rehabilitation in chronic heart failure (CHF).

METHODS:

Based on a previous systematic review, the Exercise Training Meta-Analysis of Trials for Chronic Heart Failure (ExTraMATCH II) identified and collected IPD from randomized controlled trials (RCTs) that compared exercise rehabilitation with a non-exercise control with a minimum follow-up of six months. For this abstract, the outcome of interest was all-cause mortality. Original IPD were checked for consistency and compiled in a master dataset. Standard meta-analytic models were used for aggregate data whilst two-stage and one-stage approaches, accounting for the clustering of participants within studies, were planned for statistical analyses of IPD.

RESULTS:

Overall thirty-three RCTs were included in the original systematic review, whereas within the ExTraMatch II