Scopus

Documents

Borges, F.K.[a b c] , Guerra-Farfan, E.[d] , Bhandari, M.[e] , Patel, A.[b] , Slobogean, G.[f] , Feibel, R.J.[g] , Sancheti, P.K.[h] , Tiboni, M.E.[b] , Balaguer-Castro, M.[i j] , Tandon, V.[b] , Tomas-Hernandez, J.[k] , Sigamani, A.[l] , Sigamani, A.[m] , Szczeklik, W.[n] , Mcmahon, S.J.[o] , Ślęczka, P.[p] , Ramokgopa, M.T.[q] , Adinaryanan, S.[r] , Umer, M.[s] , Jenkinson, R.J.[t u] , Lawendy, A.[v w] , Popova, E.[x y] , Nur, A.N.[z] , Wang, C.Y.[aa] , Vizcaychipi, M.[ab] , Biccard, B.M.[ac] , Ofori, S.[b] , Spence, J.[ad] , Duceppe, E.[a ae] , Marcucci, M.[a b c] , Harvey, V.[a] , Balasubramanian, K.[af] , Vincent, J.[ag] , Tonelli, A.C.[a ah ai] , Devereaux, P.J.[a b c]

Myocardial Injury in Patients with Hip Fracture: A HIP ATTACK Randomized Trial Substudy
(2024) *Journal of Bone and Joint Surgery*, .

DOI: 10.2106/JBJS.23.01459

[a] Population Health Research Institute, Hamilton, ON, Canada
[b] Department of Medicine, McMaster University, Hamilton, ON, Canada
[c] Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, ON, Canada
[d] Department of Orthopaedic Surgery and Traumatology, Hospital Universitario Vall d'Hebron, Barcelona, Spain
[e] Division of Orthopaedic Surgery, Department of Surgery, McMaster University, Hamilton, ON, Canada
[f] Department of Orthopaedics, University of Maryland School of Medicine, Baltimore, MD, United States
[g] Division of Orthopaedic Surgery, Department of Surgery, The Ottawa Hospital, University of Ottawa, General Campus, Ottawa, ON, Canada
[h] Sancheti Institute for Orthopaedics & Rehabilitation, PG College, Pune, India
[i] Department of Orthopaedic Surgery and Traumatology, Parc Taulí Hospital Universitario, Sabadell, Spain
[j] Department of Orthopaedic Surgery and Traumatology, Hospital Clinic Barcelona, Barcelona, Spain
[k] Orthopaedic and Traumatology Department, Vall d'Hebron Hospital, Barcelona, Spain
[l] Numen Health Bangalore, Bangalore, India
[m] Department of Orthopedics, Government TD Medical College Vandanam, India
[n] Center for Intensive Care and Perioperative Medicine, Jagiellonian University Medical College, Krakow, Poland
[o] Department of Surgery, Oak Valley Health, Markham, ON, Canada
[p] Independent Public Health Care Center, SPZOZ Myślenice, Myślenice, Poland
[q] Division of Orthopaedic Surgery, University of the Witwatersrand, Johannesburg, South Africa
[r] Department of Anaesthesiology and Critical Care, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India
[s] Department of Surgery, Aga Khan University, Karachi City, Pakistan
[t] Sunnybrook Health Sciences Centre, Toronto, ON, Canada
[u] Institute of Health Policy Management and Evaluation, University of Toronto, Toronto, ON, Canada
[v] Department of Surgery, University of Western Ontario, London, ON, Canada
[w] Lawson Health Research Institute, London, ON, Canada
[x] The Sant Pau Biomedical Research Institute, Barcelona, Spain
[y] Iberoamerican Cochrane Center, Barcelona, Spain
[z] Department of Orthopaedic Surgery, Shifa International Hospital, Islamabad, Pakistan
[aa] Department of Anaesthesiology, Faculty of Medicine, University Malaya, Kuala Lumpur, Malaysia
[ab] Section of Anaesthetics, Pain Medicine & Intensive Care, Department of Surgery and Cancer, Imperial College London, Chelsea and Westminster Hospital, London, United Kingdom
[ac] Department of Anaesthesia and Perioperative Medicine, Groote Schuur Hospital, University of Cape Town, Western Cape, South Africa
[ad] Department of Anesthesia and Critical Care, McMaster University, Hamilton, ON, Canada
[ae] Department of Medicine, University of Montreal, Montreal, QC, Canada
[af] Department of Statistics, Population Health Research Institute, David Braley Cardiac, Vascular and Stroke

Research Institute, Hamilton, ON, Canada
[ag] Perioperative Medicine and Surgical Research Unit, Population Health Research Institute, David Braley Cardiac, Vascular and Stroke Research Institute, Hamilton, ON, Canada
[ah] Department of Medicine, Unisinos University, São Leopoldo, Brazil
[ai] Internal Medicine Service, Hospital de Clinicas de Porto Alegre, Porto Alegre, Brazil

Abstract
Background: Myocardial injury after a hip fracture is common and has a poor prognosis. Patients with a hip fracture and myocardial injury may benefit from accelerated surgery to remove the physiological stress associated with the hip fracture. This study aimed to determine if accelerated surgery is superior to standard care in terms of the 90-day risk of death in patients with a hip fracture who presented with an elevated cardiac biomarker/enzyme measurement at hospital arrival. Methods: The HIP fracture Accelerated surgical TreaTment And Care tracK (HIP ATTACK) trial was a randomized controlled trial designed to determine whether accelerated surgery for hip fracture was superior to standard care in reducing death or major complications. This substudy is a post-hoc analysis of 1392 patients (from the original study of 2970 patients) who had a cardiac biomarker/enzyme measurement (>99.9% had a troponin measurement and thus "troponin"is the term used throughout the paper) at hospital arrival. The primary outcome was all-cause mortality. The secondary composite outcome included all-cause mortality and non-fatal myocardial infarction, stroke, and congestive heart failure 90 days after randomization. Results: Three hundred and twenty-two (23%) of the 1392 patients had troponin elevation at hospital arrival. Among the patients with troponin elevation, the median time from hip fracture diagnosis to surgery was 6 hours (interquartile range [IQR] = 5 to 13) in the accelerated surgery group and 29 hours (IQR = 19 to 52) in the standard care group. Patients with troponin elevation had a lower risk of mortality with accelerated surgery compared with standard care (17 [10%] of 163 versus 36 [23%] of 159; hazard ratio [HR] = 0.43 [95% confidence interval (CI) = 0.24 to 0.77]) and a lower risk of the secondary composite outcome (23 [14%] of 163 versus 47 [30%] of 159; HR = 0.43 [95% CI = 0.26 to 0.72]). Conclusions: One in 5 patients with a hip fracture presented with myocardial injury. Accelerated surgery resulted in a lower mortality risk than standard care for these patients; however, these findings need to be confirmed. Copyright © 2024 by The Journal of Bone and Joint Surgery, Incorporated.

Correspondence Address
Borges F.K.; Population Health Research InstituteCanada; email: Flavia.borges@phri.ca

Publisher: Lippincott Williams and Wilkins

ISSN: 00219355
CODEN: JBJSA
PubMed ID: 39052767
Language of Original Document: English
Abbreviated Source Title: J. Bone Jt. Surg.
2-s2.0-85199714096
Document Type: Article
Publication Stage: Article in Press
Source: Scopus

ELSEVIER
Copyright © 2024 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.
RELX Group™