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Data Article

Data on sex differences in one-year outcomes of out-of-hospital cardiac arrest patients without ST-segment elevation



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ABSTRACT

Sex differences in out-of-hospital cardiac arrest (OHCA) patients are increasingly recognized. Although it has been found that post-resuscitated women are less likely to have significant coronary artery disease (CAD) than men, data on follow-up in these patients are limited. Data for this data in brief article was obtained as a part of the randomized controlled Coronary Angiography after Cardiac Arrest without ST-segment elevation (COACT) trial. The data supplements the manuscript "Sex differences in out-of-hospital cardiac arrest patients without ST-segment elevation: A COACT trial substudy" where it was found that women were less likely to have significant CAD including chronic total occlusions, and had worse survival when CAD was present. The dataset presented in this paper describes sex differences on interventions, implantable-cardioverter defibrillator (ICD) shocks and hospitalizations due to heart failure during one-year follow-up in patients successfully resuscitated after OHCA. Data was derived through a telephone interview at one year with the patient or general practitioner. Patients in this randomized dataset reflects a homogenous study population, which can be valuable to further build on research regarding long-term sex differences and to further improve cardiac care.

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Specifications Table

Subject	Clinical Cardiology
Specific subject area	Out-of-hospital cardiac arrest without ST-segment elevation; sex differences in out-of-hospital cardiac arrest; one-year outcomes after cardiac arrest
Type of data	Table
How data were acquired	Data was obtained from the randomized-controlled Coronary Angiography after Cardiac Arrest without ST-segment elevation (COACT) trial [1].
Data format	Raw and analysed
Parameters for data collection	Patients successfully resuscitated from OHCA, without ST-segment elevation, were included in the trial in the time period from January 2015 until July 2018. All patients that survived until one-year follow-up were included in this data in brief article.
Description of data collection	In the open-label multicentre COACT trial, which was performed in 19 hospitals in the Netherlands, patients successfully resuscitated after cardiac arrest without ST-segment elevation on the first post-resuscitation electrocardiogram were assigned to undergo immediate coronary angiography or delayed coronary angiography strategy until after neurological recovery [1]. All coronary angiography and PCI procedures were evaluated at an independent core laboratory by personnel who were unaware of the treatment assignments [1]. Follow-up data were obtained by a telephone interview with the patient [2].
Data source location	Amsterdam UMC – location VUMC De Boelelaan 1117, 1081 HV Amsterdam, the Netherlands
Data accessibility	Data are within this article.
Related research article	Eva M. Spoomans, Jorrit S. Lemkes, Gladys N. Janssens, Nina W. van der Hoeven, Lucia S.D. Jewbali, Eric A. Dubois, Peter M. van de Ven, Martijn Meuwissen, Tom A. Rijpstra, Hans A. Bosker, Michiel J. Blans, Gabe B. Bleeker, Remon Baak, Georgios J. Vlachojannis, Bob J.W. Eikemans, Pim van der Harst, Iwan C.C. van der Horst, Michiel Voskuil, Joris J. van der Heijden, Albertus Beishuizen, Martin Stoel, Cyril Camaro, Hans van der Hoeven, José P. Henriques, Alexander P.J. Vlaar, Maarten A. Vink, Bas van den Bogaard, Ton A.C.M. Heestermans, Wouter de Ruijter, Thijs S.R. Delnoij, Harry J.G.M. Crijns, Gillian A.J. Jessurun, Pranobe V. Oemrawsingh, Marcel T.M. Gosselink, Koos Plomp, Michael Magro, Paul W.G. Elbers, Yolande Appelman, Niels van Royen. Sex differences in patients with out-of-hospital cardiac arrest without ST-segment elevation: A COACT trial substudy. <i>In Press</i>

Value of the Data

- Sex differences in OHCA patients are increasingly recognized. Although it has been found that post-resuscitated women are less likely to have significant CAD than men, data on follow-up in these patients are limited. This data in brief article provides sex disparities on interventions and hospitalizations during one-year follow-up.
- All patients in this randomized dataset were successfully resuscitated after OHCA with an initial shockable rhythm in absence of ST-segment elevation and therefore a reflects a homogenous study population, which can be valuable to further build on research regarding long-term sex differences.
- The data provide insights on how sex differences in coronary angiography findings and initial treatment strategy are related with long-term follow-up in men and women and can be used to further improve personalized cardiac care.

1. Data Description

Data was obtained as a part of the randomized controlled Coronary Angiography after Cardiac Arrest without ST-segment elevation (COACT) trial. This data in brief article contains information on long-term follow-up in men and women (Table 1). Analysis was performed according to intention-to-treat principle. Events from discharge to one-year follow-up were calculated as numbers and percentages of patients with odds ratios and 95% confidence intervals for dichotomous outcomes. Data was analyzed using IBM SPSS Statistics version 26 (IBM, Armonk, New York).

Table 1
Interventions or hospitalization during one-year follow-up.

	Men (N = 413)	Women (N = 109)	Odds ratio 95% CI
Coronary angiography – no. of patients. (%)	17/413 (4.1)	3/109 (2.8)	0.70 (0.19–2.29)
Myocardial infarction – no. of patients. (%)	3/413 (0.7)	0/109 (0.0)	^a
PCI – no. of patients. (%)	13/413 (3.1)	3/109 (2.8)	0.87 (0.24–3.11)
CABG – no. of patients. (%)	3/413 (0.7)	1/109 (0.9)	1.27 (0.13–12.29)
Hospitalization due to heart failure – no (%)	2/413 (0.5)	1/109 (0.9)	1.9 (0.17–21.18)
ICD implantation – no. of patients. (%)	11/413 (2.7)	1/109 (0.9)	0.34 (0.04–2.64)
ICD shocks – no. of patients. (%)	31/413 (7.5)	9/109 (8.3)	1.11 (0.51–2.41)
Appropriate ICD shocks – no. of patients. (%)	27/413 (6.5)	4/109 (3.7)	0.12 (0.02–0.64)
Composite of death, revascularization or myocardial infarction after index hospitalization – no. of patients. (%)	168/413 (40.7)	48/109 (44.0)	1.15 (0.75–1.76)

All data are expressed in numbers and percentages (%).

^a OR and 95% not determined because of absence of events in women. PCI denotes percutaneous coronary intervention, CABG coronary artery bypass graft, ICD implantable cardioverter-defibrillator.

2. Experimental Design, Materials and Methods

The investigator initiated, multicenter randomized controlled COACT trial investigated the benefit of immediate coronary angiography in patients successfully resuscitated after cardiac arrest without ST-segment elevation on the first post-resuscitation electrocardiogram [1]. Important exclusion criteria were signs of ST-segment elevation, shock or an obvious non-coronary cause [1]. Further in- and exclusion criteria were reported previously [3]. Eligible patients for the study were randomized in a 1:1 ratio to either immediate coronary angiography (i.e. within two hours after randomization) or delayed coronary angiography strategy until after neurological recovery. In 19 participating hospitals in the Netherlands, a total of 552 patients were enrolled from January 2015 until July 2018. Post-resuscitation care was according to the resuscitation guidelines [4]. Fourteen patients retroactively withdrew informed consent. In addition, 13 patients refused consent for the one-year follow-up and 3 patients were lost to follow-up. In total, 522 patients had data available for assessment at one year [2].

Data for the one-year follow-up included patients of whom follow-up was obtained and did not retract informed consent [2]. Death registries were searched to registry deaths. Follow-up data on interventions such as death, myocardial infarction, invasive coronary angiography or interventions, hospitalizations or implantable cardioverter defibrillator (ICD) therapy was obtained via an telephone interview with the patient, a family member or via patients' the general physician [2]. Information was obtained by members of the research team who were blinded for the patient's treatment allocation.

Ethics Statement

Deferred informed consent was obtained from all patients that were enrolled in the study with the use of a prespecified procedure [1].

Declaration of Competing Interest

Supported by unrestricted research grants from the Netherlands Heart Institute, Biotronik, and AstraZeneca. Dr. Vlachojannis reports receiving grant support from MicroPort Orthopedics and Daiichi Sankyo; and Dr. van Royen, receiving grant support from Philips, Biotronik, and Abbott and honoraria from Medtronic. No other potential conflict of interest relevant to this article was reported.

Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi:[10.1016/j.dib.2020.106521](https://doi.org/10.1016/j.dib.2020.106521).

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