PEER REVIEW HISTORY

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ARTICLE DETAILS

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<td>AUTHORS</td>
<td>Soedamah-Muthu, Sabita; Geleijnse, Johanna; Giltay, Erik; Kromhout, Daan</td>
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VERSION 1 - REVIEW

| REVIEWER           | Prof. Dr. med. Heinz Völker  
| University Potsdam  
| Am Neuen Palais 10  
| 14469 Potsdam, Germany |
| REVIEW RETURNED    | 12-Jun-2012 |

THE STUDY

The objective of the study is not new and seems not a prespecified endpoint. Additionally the investigation is done retrospectively. Otherwise the low prevalence (20%) of diabetes in post MI patients with a mean age of 69 years could not be explained. Why didn't the authors performed an oral glucose tolerance test?

RESULTS & CONCLUSIONS

Because the study is a retrospective one and no oral glucose tolerance test is performed, the results are not representative.

REVIEWER

Tina Ken Schramm  
Senior Consultant Cardiologist  
Department of Cardiology  
Holbaek University Hospital  
Denmark

REVIEW RETURNED

17-Jun-2012

THE STUDY

The study is a cross sectional study based on a randomised trial, with includes a substantial risk of selection bias. By excluding more sick individuals not able to participate in the randomised study, risk factor estimations may be underestimated. Nevertheless the risk of selection bias been adequately noted in the article.

The numbers of diabetes patients are low in particularly in the 2002 group, which makes estimates for temporal differences in the diabetes group less confident. These relations and the possible
VERSION 1 – AUTHOR RESPONSE

From reviewer 1:

3. The objective of the study is not new and seems not a prespecified endpoint. Additionally the investigation is done retrospectively. Otherwise the low prevalence (20%) of diabetes in post MI patients with a mean age of 69 years could not be explained. Why didn't the authors performed an oral glucose tolerance test?

Authors reply: The reviewer correctly noted that we did not perform oral glucose tolerance tests (OGTT). We know that European guidelines recommend screening all patients with coronary artery disease by OGTT.[1] However, performance of OGTT in cardiological routine care is limited, mainly due to its time-consuming protocol, costs and overall inconvenience.[2] In the Euro Heart Survey an OGTT was only performed in 56% of the patients with coronary artery disease but without known type 2 diabetes.[3] In the Netherlands, fasting plasma glucose is usually measured by cardiologists. With an OGTT more diabetes cases would have been diagnosed than with fasting plasma glucose alone[4], but we diagnosed our diabetic patients on basis of self-reported physician diagnosis, use of antidiabetic medication or casual plasma glucose concentrations. The number of patients with diabetes mellitus was in our study 1,014, which is 20% of the total study population. This is in accordance with many other studies. Depending on the underlying study population the prevalence for type 2 diabetes varied from 20–33% in patients with acute myocardial infarction[5,6,7,8], 10-27% in patients with acute coronary syndrome[9,10], 22–27% in patients with coronary artery disease[3,11], and 18-23% in patients scheduled for coronary angiography[12,13]. All these studies contained elderly people (mean age 60-70 years). This information has now been added to the Discussion on page 16, line 293-302.

References
10. Okosime OE et al. Can admission and fasting glucose reliably identify undiagnosed diabetes in


4. The wording of the manuscript is somewhat unusual: ... patients were treated with several drugs (eg. antihypertensive). In cardiological terminology it means: Betablocker and ACE-inhibitors are part of a guideline based therapy for secondary prevention after myocardial infarction.

Authors reply: We have deleted the sentence in the abstract line 86: “Diabetic and non-diabetic patients were similarly treated with several drugs.” The next sentence explains it more accurately: “Prescription of antihypertensive drug (diabetic vs. non-diabetic patients respectively, 95% vs. 93%, p=0.08) and statin treatment were high (86% and 90%, p=0.11)”(see page 6, lines 86-88).

5. Because the study is a retrospective one and no oral glucose tolerance test is performed, the results are not representative.

Authors reply: These limitations considering restricted generalizability were discussed in the manuscript on page 16-17, lines 293-313. We acknowledge in our limitation section of the Discussion that diagnosis was not based on the OGTT. Aside from these limitations the study contains important information on how levels and trends in cardiovascular risk factors and drug treatment evolved between 2002 and 2006 in 4,837 patients with myocardial infarction with or without diabetes.

From reviewer 2:

6. The study is a cross sectional study based on a randomised trial, with includes a substantial risk of selection bias. By excluding more sick individuals not able to participate in the randomised study, risk factor estimations may be underestimated. Nevertheless the risk of selection bias been adequately noted in the article.

Authors reply: Thank you for highlighting that we addressed selection bias adequately. Because of a similar comment by the other reviewer we extended the paragraph on limitations in the Discussion section of the manuscript (page 16-17, lines 293-313).

7. The numbers of diabetes patients are low in particularly in the 2002 group, which makes estimates for temporal differences in the diabetes group less confident. These relations and the possible consequences for the results should be discussed in the article.

Authors reply:

The relative proportion of diabetes patients in the total sample is more important than the absolute number. We recruited less patients in 2002 than in the other years of our study (n=522). Therefore, a low number (n=94) of diabetic patients in 2002 (shown in Table 3 and 4) is expected. The relative proportion of diabetic patients is however 18% (94/522), which does not deviate much from the other inclusion years and earlier publications. We now address this point in the Discussion section on page 17, lines 310-313: “The number of patients in each examination year varied, but was sufficiently high to describe prevalence rates, risk factor levels and trends over time.”
### REVIEWER

| Tina Ken Schramm, MD  
| Dept. of Cardiology  
| Amager University Hospital  
| Copenhagen  
| Denmark  
| No competing interests.  

### REVIEW RETURNED

| 12-Sep-2012  

### GENERAL COMMENTS

The results of this study are not surprising or new. Nevertheless, it adds to current knowledge on the temporal trends in risk factors in MI patients with and without diabetes, in a relatively large and well-defined population. Due to the possibility of selection bias, results should be interpreted with caution, which has been stated in the article.

The authors have answered relevant to the reviewers questions, and I have no further comments.
Cardiovascular risk factor management of myocardial infarction patients with and without diabetes in the Netherlands between 2002 and 2006: a cross-sectional analysis of baseline data

Sabita S Soedamah-Muthu, Johanna M Geleijnse, Erik J Giltay and Daan Kromhout

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