Do Invasive Treatment and Time Waited Influence Socioeconomic Differences in Mortality for Patients Admitted First Time with Non ST-Elevation Myocardial Infarction?

S. Martensson, MS1, D. Gyrd-Hansen, PhD2, E. Prescott, DrPH3, P. Kragh Andersen, DrPH4, G. Gislason, PhD5 and M. Osler, DrPH1

1Capital Region of Denmark, Glostrup, Denmark, 2University of Southern Denmark, Odense, Denmark, 3Bispebjerg University Hospital, Copenhagen, Denmark, 4University of Copenhagen, Copenhagen, Denmark, 5University of Southern Denmark, Copenhagen, Copenhagen, Denmark

INTRODUCTION: The purpose of this study is to investigate whether there is social inequality in treatment and waiting time and whether these factors explain social inequality in case fatality in a nationwide sample of patients admitted first time to a hospital with diagnosis of non ST-elevation myocardial infarction (NSTEMI) in Denmark.

METHODS: All patients admitted first time with NSTEMI from 2001 to 2009 in Denmark were included. Data in the National Patients Registry were linked with data from administrative databases and the Danish Heart Registry to obtain information on education and clinical information. We measured time from admission to coronary angiography (CAG), percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG). The outcomes were 30 day and one year case fatality. The data were analysed using Cox proportional hazards models and cumulative incidence curves.

RESULTS: We found that patients with low education had higher 30 day and 1-year case fatality rates when not including information regarding their course of invasive examination or treatment. Probability of CAG at three days was 28.9% for patients with higher compared to 17.7% for patients with lower education. Among patients referred to CAG we found no social inequality in 30 days case fatality, both excluding and including time waiting for CAG as an explanatory variable. For the same patients, 1-year case fatality was significantly higher among those with a lower education compared a higher education. This difference was unaffected by adjusting for time waiting for CAG. Analysis of PCI and CABG treatment rates revealed no inequality.

CONCLUSIONS: Despite nominal equal access to health care, social inequality in case fatality after non ST-elevation myocardial infarction (NSTEMI) exists in Denmark. Patients with a low education are less likely to have angiography performed within three days following NSTEMI. However, this does not seem to explain inequality in case fatality.