Lower myocardial infarction survival in UK than Sweden blamed on slow uptake of new treatments

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A comparison of outcomes in patients with acute myocardial infarction shows that 30 day mortality was more than a third higher in the United Kingdom than in Sweden during 2004-10. The researchers concluded that this was because Sweden was much quicker to take up new technologies and to implement evidence based practice.

The study, published in the Lancet, indicated that more than 11,000 lives could have been saved over seven years if UK patients had had the same care as people in Sweden. The researchers analysed data from national clinical registries between 2004 and 2010 concerning 391,077 patients from 242 hospitals in the UK and 119,786 patients from 86 hospitals in Sweden.

The unadjusted 30 day mortality was 7.6% (95% confidence interval 7.4% to 7.7%) in Sweden and 10.5% (10.4% to 10.6%) in the UK. The UK to Sweden standardised mortality ratio was 1.37 (1.30 to 1.45), indicating that 11,263 deaths from acute myocardial infarction might have been avoided during the study period. The greatest difference in death rates was seen in 2004, and the gap narrowed over time. However, mortality was always higher in the UK even in clinical subgroups such as those with ST segment elevation.

Sweden had earlier and more extensive uptake of primary percutaneous coronary intervention such as balloon angioplasty or stent placement (59% of cases versus 22%) and more frequent use of β blockers at discharge (89% versus 78%). However, the rate of prescription of statins and angiotensin converting inhibitors or angiotensin receptor blockers at discharge was higher in the UK than in Sweden.

Sweden and the UK are the only two countries in the world that have continuous national clinical registries for acute coronary syndrome to which contribution is mandatory for hospitals. Both countries have healthcare systems that are universal, funded from taxation, and free at the point of use. And they spend a similar proportion of their gross domestic product on health.

The researchers said that the UK was slower than Sweden to take up effective treatments. For example, the use of primary percutaneous coronary intervention to treat ST segment elevation myocardial infarction lagged behind that in Sweden. The rate in 2010 in the UK (53%) was similar to that in Sweden in 2005 (50%). Use of the treatment was recommended in guidelines in the United States in 2004 and in Europe in 2005, but the UK did not have a national policy on this until the end of 2008.

“Our findings are a cause for concern,” said one of the coauthors, Harry Hemingway, of the National Institute for Cardiovascular Outcomes Research at University College London. “The uptake and use of new technologies and effective treatments recommended in guidelines has been far quicker in Sweden. This has contributed to large differences in the management and outcomes of patients.”

Writing in a linked commentary, Chris Gale, of the University of Leeds, said that aspects of healthcare such as a patient’s appropriateness for treatment and drug adherence might have differed between the UK and Sweden and that this difference could have influenced the mortality rates.

He added, “Efforts to improve cardiovascular outcomes in the UK should concentrate on data enhancement through the linkage of electronic healthcare records and the early and systematic implementation of evidence-based therapies across the National Health Service.”


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