Lower rate of invasive revascularisation in acute coronary syndrome patients with significant stenosis on coronary angiography when angiography is performed on a diagnostics only hospital

Hvelplund, Anders; Galatius, Søren; Madsen, Mette; Rasmussen, Jeppe Nørgaard; Rasmussen, Søren; Abildstrøm, Steen Zabell; Madsen, Jan Kyst

Publication date: 2009

Document version
Publisher's PDF, also known as Version of record

We investigated if there was a difference in the rate of invasive revascularisation (PCI and CABG) after coronary angiography (CAG) following first acute coronary syndrome (ACS) depending on the type of hospital performing the CAG.

Background: Denmark (population 5.5 million) has a universal health insurance coverage system and uniform national guidelines for the treatment of ACS. Invasive treatment of cardiac patients has been centralized to a few highly specialized units.

Methods

We identified 24 910 patients with ACS (83.5% with myocardial infarction) of whom 18 236 patients were examined with CAG. In all 13 964 (73%) were revascularised. Of 2207 patients having significant stenosis in one or more vessels from the diagnostics only hospitals there were 78% receiving revascularisation vs. 91% of the 12 596 patients from the invasive hospitals. Adjusting for known differences between the groups such as gender, age, number of stenotic vessels and the other variables mentioned, there was a hazard ratio (HR) of 0.37 (95% CI 0.35-0.39, p < 0.0001) of receiving revascularisation for the patients examined with CAG in the diagnostics only hospitals in comparison to those examined in the invasive centres. Excluding the acute CAGs (day 0-1) we found 2070 patients having significant stenosis from the diagnostics only hospitals and 78% received revascularisation vs. 84% of the 4661 patients from the invasive hospitals. This gave a HR of 0.55 (95% CI 0.52-0.59, p < 0.0001).

Results

Figure 2. Cumulative incidence curves for receiving revascularization depending on where CAG was performed

Figure 3. Association between type of hospital doing the CAG and the chance of revascularisation of a significant stenosis

Both models adjusted for number of vessels diseased, sex, age, socioeconomic status, admission year, previous revascularisation, comorbidity and medicine use

Conclusion

ACS patients with a significant stenosis on the CAG are less likely to be revascularised when the CAG is performed in an assisting CAG centre