Abstract: P6510
Frailty and in-hospital outcomes in percutaneous coronary interventions

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Topic(s): Coronary Intervention: Outcome

Citation:

Funding Acknowledgements: Research and Development Department at the Royal Stoke Hospital, Keele University and Biosensors International

Background: Frailty may be an important marker for poor outcomes in percutaneous coronary intervention (PCI) and there is limited literature on outcomes based on frailty from national cohorts.

Purpose: This study evaluates the prevalence of frailty, changes in frailty over time and outcomes associated with frailty in a national American cohort of patients who underwent PCI.

Methods: The study included adults who underwent PCI in the National Inpatients Sample between 2004 and 2014. Frailty risk was determined using a validated Hospital Frailty Risk Score (HFRS) using the cutoffs <5, 5-15 and >15 corresponding to low, intermediate and high HFRS.

Results: There were 7,306,007 PCI admissions in this cohort. A total of 94.58%, 5.39% and 0.03% of admissions were for low HFRS, intermediate HFRS and high HFRS, respectively. The proportion of intermediate or high frailty risk patients increased over time from 1.9% in 2004 to 11.7% in 2014. In-hospital death increased from 1.0% with low HFRS to 13.9% with high HFRS and average length of stay increased from 2.9±3.3 days to 17.1±15.5 days from low to high HFRS. Greater frailty risk was associated with greater average inpatient cost which was $17,743±11,059, $38,824±34,809 and $56,119±49,772 for low, intermediate and high HFRS, respectively. There were increased adverse outcomes with high frailty including greater in-hospital death (OR 9.91 95%CI 7.17-13.71), in-hospital bleeding complications (OR 4.99 95%CI 3.82-6.51), in-hospital vascular complications (OR 3.96 95%CI 3.00-5.23) and in-hospital stroke (OR 10.49 95%CI 8.28-13.29) comparing high to low HFRS.

Conclusions: More than 1 in 20 patients who undergo PCI have intermediate or high risk of frailty which has significantly increased over time. There are poor outcomes and increased inpatient costs associated with greater frailty. Improvements in education of healthcare workers and increased awareness of frailty could facilitate frailty-tailored care to minimise risk of adverse outcomes and its associated costs.
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