IMPACT OF SUSTAINED ANEMIA ON LONG TERM CLINICAL OUTCOMES IN PATIENTS WHO UNDERWENT DRUG-ELUTING STENT

ACC Poster Contributions
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Background: Only a few studies demonstrated that anemia is an independent predictor of high 30-day major adverse cardiac events (MACEs) and 1-year MACEs after percutaneous coronary intervention (PCI). The aim of this study is to elucidate if the anemia during the follow up period is associated with poor long term clinical outcomes.

Methods: Anemia was defined by WHO criteria (hemoglobin (Hb)<12g/dL for female and <13g/dL for male). Laboratory study was performed at the index drug-eluting stent (DES) implantation and between 3 and 12 months later. We categorized patients into four groups based on initial and follow-up Hb (normal, corrected, newly developed, sustained anemia group).

Results: We analyzed consecutive 9,292 patients performed PCI with DES in COACT (CathOlic medical center percutAneous Coronary inTervention) registry from Jan 2004 to Dec 2009. Of these, 4,721 with initial and follow-up Hb were enrolled and median follow up was 26.8 months. After adjusting multiple covariates, newly developed and sustained anemia group demonstrated a significant increase in a hazard ratio (HR) of a composite of MACE (HR=2.38, p<0.01, 95% confidence interval (CI) 1.72-3.29; HR=2.47, p<0.01, 95% CI 1.81-3.37) comparing with normal group. There was no significant increase of HR in the anemia group corrected during follow up (p=0.637, 95% CI 0.69-1.84).

Conclusions: Follow-up anemia is a poor prognostic factor, and more important than anemia at the index PCI, which should be corrected.

Figure 1. Kaplan-Meier curve