471855 - PERIOPERATIVE MYOCARDIAL ISCHEMIA IN ISOLATED SYSTOLIC HYPERTENSION(PROMISE): A PRELIMINARY REPORT

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Introduction: Isolated Systolic Hypertension (ISH) is increasingly recognized as a cardiovascular risk¹. It is associated with aging and accounts for 65% of uncontrolled hypertension. The WHO reports that suboptimal BP (> 115 mm Hg SBP) is responsible for 62% of cerebrovascular disease and 49% of ischemic heart disease. The relationship between ISH and perioperative cardiac complications is poorly understood. We hypothesized that ISH surgical patients would have a higher incidence of perioperative myocardial ischemia and hence potentially a higher risk for myocardial infarction and cardiac death.

Methods: The primary objective is to determine if the incidence of perioperative myocardial ischemia in ISH patients is triple that of normotensive patients admitted for non-cardiac surgery, as determined by 48-hour ambulatory ST segment ECG (AECG). The sample size was calculated to be 360 patients with 180 patients being an ISH. Inclusion criteria are: age ≥ 45 years; elective non cardiac surgical procedure; expected hospital stay ≥ 48 hours; Revised Cardiac Risk Index (RCRI) ≤ 2 . Exclusion criteria are: a fibrillation; LBBB; MI < 3 months; unstable coronary syndrome; dialysis. Ischemia is defined as reversible ST depressions ≤ 1 mm measured at 60 msec from the J point or ST elevations ≥ 2 mm at the J point lasting longer than one minute. After REB approval, to date recruitment resulted in 164 patients.

Results: The preliminary results of 164 patients demonstrated a mean age of 65+10; male:female 77:87; RCRI 1:2 148(90.2%):16(9.8%). The overall incidence of myocardial ischemia is 21.3%.

Discussion: As preliminary results, the prevalence of the perioperative ISH is unknown. However, the overall myocardial ischemia incidence of 21.3% is high for 48 hours of AECG monitoring in patients with RCRI ≤ 2 . A database study of over 700,000 patients showed that of the total mortality, 8,443 were from RCRI ≤ 2 patients; only 2,338 were from RCRI Class ≥ 3 . The bulk of the mortality is in the “low risk” patients². With these preliminary results, we feel that ISH “low risk” patients may be the forgotten patients.

References: 1. Kannel WB. Fifty years of Framingham Study contributions to understanding hypertension. J Hum Hypertens 2000; 14(2):83-90. 2. Lindenauer PK, Pekow P, Wang K, Mamidi DK, Gutierrez B, Benjamin EM. Perioperative beta-blocker therapy and mortality after major noncardiac surgery. N Engl J Med 2005; 353(4):349-61.