SEASONAL INCIDENCE OF EMERGENT CORONARY ARTERY BYPASS GRAFTING SURGERY

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Abstract: Emergent coronary artery bypass grafting (CABG) surgery often is required in the case of severe coronary artery disease which is refractory to traditional management. The objective of our study was to test the hypothesis that there is seasonal variation in the incidence of emergent CABG. A sinusoidal logistic regression model was used to analyze operative data at our cardiovascular institute spanning 5939 calendar days. Results A cyclic peak risk for emergent CABG was observed for late winter (calendar day 66; p = 0.036). The odds ratios for the 1-, 2- and 3-month window surrounding this peak were 1.8 (95% CI = 0.94-3.5, p = 0.072), 1.6 (95% CI = 1.06-2.5, p = 0.024) and 1.4 (95% CI = 0.9-1.8, p = 0.066), respectively. Our results suggest that a seasonal variation may exist in the incidence of patients presenting with severe coronary artery disease requiring emergent CABG. This information is useful in the scheduling of hospital resources and staff. It also provides important etiology clues underlying coronary artery disease that may lead to future interventions or targeted therapies.

Keywords: CAD, Seasonality, Emergent CABG, Epidemiology