

Clinical SYNTAX score for the long-term risk stratification of diabetic patients undergoing percutaneous coronary revascularization

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Background: Optimal risk models predicting long-term clinical outcome for diabetic patients with coronary artery disease (CAD) are limited. SYNTAX score (SS) is a lesion-based angiographic scoring system for choosing suitable revascularization strategy in complex CAD. Clinical SYNTAX score (CSS), a modified SS combined with relevant clinical factors, has been developed to improve the predictive ability for adverse clinical outcome after coronary revascularization. **Methods and Results:** Between December 2004 and September 2008, consecutive 235 type 2 diabetics aged < 80 years with serum creatinine < 2mg/dl treated with percutaneous coronary intervention (PCI). The CSS was available in 198 patients. The study patients were divided into 3 groups according to CSS tertiles: CSSLOW < 9.5 (n = 64), 9.5 < CSSMID < 20.7 (n = 61), and CSSHIGH > 20.7 (n = 73). Kaplan-Meier estimates at 4.8 years mean follow-up showed that CSSHIGH was associated with significantly higher rate of mortality (CSSLOW 3.3%, CSSMID 2.5%, CSSHIGH 18.5%; logrank p = 0.001) and major cardiovascular and cerebrovascular events (MACCE) (CSSLOW 16.9%, CSSMID 19.1%, CSSHIGH 39.1%; logrank p = 0.009) as compared with the other 2 tertiles. Areas under the curve for the SS and CSS for mortality were 0.63 and 0.78 and for MACCE were 0.58 and 0.65, respectively. **Conclusion:** CSS is superior to SS in terms of predicting adverse outcome in diabetics undergoing PCI.