

The Syntax Score in 'Real Life' Interventional Cardiology Practice

Guy Witberg², Ifat Lavi¹, Ran Kornowski¹

¹*Department of Cardiology, Rabin Medical Center, Israel*

²*Department of Internal Medicine E, Rabin Medical Center, Israel*

Background:

The SYNTAX score (SS) was developed to create an objective angiographic measure to assign patients with LM or 3VD coronary disease to PCI or CABG. To date, there is no data as to the extent of the SS use in 'real life' practice.

Methods: To assess the adequacy of our decision making process, we studied 290 consecutive patients who underwent coronary angiography from 1/2009 to 12/2010 with LM/3VD diagnosis and were referred to CABG (n=140) or PCI (n=150). Each case was reviewed and the SS was calculated. We compared the actual referral statistics for CABG vs. PCI according to SS values and adherence to the ESC guidelines. Clinical outcomes at 3 years were also collected.

Results:

The baseline clinical and angiographic characteristics were similar between the two groups. The average SS was higher in the group assigned to CABG (23.8 vs. 19.0, $p < 0.001$). In 65% of cases, the mode of revascularization was in accordance to the SS. In the PCI group the rate was 78%, in the CABG group the rate was only 51%, analyzing by coronary anatomy, the agreement rate was 69% in the 3VD group and only 51% in the LM group. The clinical judgment of the cardiologist has a sensitivity of 0.69 (95% CI 0.59-0.78) and specificity of 0.63 (CI 0.55-0.7) for accurately assigning patients for surgical revascularization, a PPV of 0.50 (CI 0.42-0.59) and NPV of 0.79 (CI 0.71-0.85). Patients whose mode of revascularization was not in accordance to SS had higher rate of combined adverse clinical outcomes (33.7% vs. 21.7% $p = 0.034$), driven mainly by repeat revascularizations (11.9% vs. 4.8% $p = 0.033$).

Conclusions:

There was a considerable disagreement between the clinical decision and measured SS in patients with LM/3VD. At 3 years follow up, the rate of adverse clinical outcomes was higher in patients whose mode of revascularization was not in accordance to SS.