Early Healing of EPC Capturing GENOUS Stent by OCT: the EGO-Genous Study Interim Results: ACC Moderated Poster Contributions
McCormick Place South, Hall A
Sunday, March 25, 2012, 9:30 a.m.-10:30 a.m.

Session Title: Acute Coronary Syndromes: Clinical II
Abstract Category: 4. Acute Coronary Syndromes: Therapy
Presentation Number: 1165-92

Authors: Stephen W Lee, Simon Lam, Kelvin Chan, Michael Chan, Shun Ling Kong, Ka Lam Wong, Frankie Tam, Raymond Chan, University of Hong Kong, Queen Mary Hospital, Hong Kong, Hong Kong

Background: In-vivo systemic evaluation of early stent healing (coverage around first month) has never been reported. The Genous Stent (OrbusNeich Medical, FL, USA) with pro-healing properties as reported in animal studies via endothelial progenitor cell (EPC) capturing was studied.

Methods: 50 consecutive patients successfully treated with Genous Stent were prospectively randomized to 5 weekly groups for early (2nd to 6th week) OCT FU. Strut coverage and neointimal analyses were performed by Core Laboratory, with further in-house stringent classification into 6 categories. Properly apposed and malapposed struts, and frames over side-branch were separately analyzed.

Results: Enrollment and OCT FU were completed. To date, 31 patients (ACS 61.3%, diabetes 41.9%) had OCT results analyzed (total 4,621 OCT frames and 46,769 properly apposed struts). The mean % coverage in properly apposed struts were 46.5%, 79.9%, 87.1%, 92.6% & 95.8% in the 2nd to 6th weekly group, between group p-values <0.001, 0.027, 0.076, & 0.320, respectively; 100% coverage was observed at around 42 days (refer to diagram). No MACE was recorded. Study Limitations: (1) mostly ACS patients, (2) no baseline OCT for malapposed strut comparison, (3) no other BMS control arm, & (4) very early OCT strut coverage classification requires further validation.

Interim Conclusion: For the first time, the early healing profile of a stent was established in-vivo by OCT. Near 100% stent coverage was documented in EPC capturing stent in 6 weeks.