

Incidence ,Predictors and Outcome of Early and Late Stent Thrombosis and Premature Discontinuation of Thienopyridine Therapy after Successful Implantation of Drug Eluting Stents

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Background: Data regarding the risks and impact of thrombosis of drug eluting stents (DES) in Israel is limited.

Objectives: To evaluate the incidence, predictors and clinical outcome of stent thrombosis (STH) and premature discontinuation of thienopyridine after implantation of DES in an unselected Israeli population.

Methods: Data were collected prospectively from all consecutive patients who underwent DES implantation at our Center from February 2006 until January 2007. Follow-up was by phone interview or by collecting data from admission files. Confirmed and suspected STH were pooled together as defined in the medical literature.

Results: Three hundred fourteen patients were successfully treated with DES (413 lesions). At 20 ± 6.7 months follow up (median 22 months), 14 patients (4.4%) had STH. Two patients had acute thrombosis (within 48 hours, 0.6%) and 12 patients had non-acute thrombosis (3.8%). Among these 14 patients five died (case fatality rate, 36%). Predictors of STH were male gender ($p=0.05$), diabetes ($p=0.05$), history of thromboembolic event ($p=0.003$), reduced cardiac Canadian scale (CCS) functional capacity at implantation ($p=0.02$) and treatment with 2B3A inhibitors during the procedure ($p=0.048$). We found no correlation with the indication for stent implantation (acute myocardial infarction vs unstable vs stable angina pectoris). Risk factors for premature discontinuation of thienopyridine (3 month or less) were Arab ethnic origin ($p=0.001$), elementary education ($p=0.004$), receiving national insurance benefits ($p=0.003$), absence of cardiac follow up ($p<0.001$) and absence of explanation about the importance of thienopyridine therapy by the doctor ($p<0.001$). Seven of the 12 non-acute STH events occurred in patients receiving thienopyridine therapy. At one year follow-up, 184 patients were still receiving thienopyridine and 289 were receiving aspirin.

Conclusions: The incidence of STH at 22 month follow up in “real – world” Israeli patients was substantially higher than the rate reported in clinical trials. The medical community should be aware of risk factors for STH. Subsidizing the cost of thienopyridine, providing simple and clear explanation to the patient and encouraging cardiologist follow up may prevent premature discontinuation of thienopyridine after implantation of DES.