

Biodegradable Cardiovascular Implants

Freddy Boey, Subbu Venkatraman and Huang Ying Ying
Nanyang Technological University, Singapore
mychoey@ntu.edu.sg

Fully Biodegradable Cardiovascular implants are attractive because of the ability to completely biodegrade after fulfilling their therapeutic functions and not have long term liabilities that are common with permanent implants. Ideally, the fully degradable implant can be delivered with good trackability and deploy safely and predictably using minimal changes to the delivery system. It should also have sufficient mechanical strength to provide structural integrity for an acceptable period, and then biodegrade away predictably and harmlessly. This presentation reports on two fully biodegradable devices – a peripheral cardiovascular stent and a PFO/ASD/PDA (hole in the heart) occlude implant. Both have gone through animal trials to show viable patency, minimal inflammation, no thrombogenicity and minimal occlusion.