Impact of the learning curve on procedural results and acute outcome after percutaneous coronary interventions with everolimus-eluting bioresorbable scaffolds in an all-comers population.

The implantation of bioresorbable scaffolds (BVSs) is an emerging technique in the treatment of coronary lesions and implantation of BVSs is different than that of metallic drug-eluting stents, however, due to different mechanical properties. This investigation focused on procedural and mid-term results and was designed to evaluate whether there is evidence of a learning curve with BVSs and how it might influence the clinical outcome. In an all-comers registry, the first 100 consecutive patients were compared with the second 100 patients. Target parameters were major adverse cardiac events (MACEs), including cardiac death, any myocardial infarction, and percutaneous or surgical target lesion revascularization (TLR). Target vessel failure (TVF) comprised cardiac death, target vessel myocardial infarction, and percutaneous or surgical target vessel revascularization (TVR). Baseline characteristics were not significantly different. Post-dilatation was used significantly more often in the second group (23.8% vs. 50.5%, p<0.05) as was intravascular imaging (9% vs. 19%, p<0.05). In-hospital MACEs (2.0% for both groups) and median duration of hospital stay (4 (2-6) days) did not differ significantly. During a
follow-up of 210 (155-369) or 200 (176-286) days (p=n.s.) for the first and second groups, respectively, MACE (11.2% vs. 1.1%, p<0.01), TVF (10.1% vs. 1.1%, p<0.01), and TVR (9.9% vs. 1.1%, p<0.05) rates were significantly lower in the second group. There is evidence of a learning curve. Post-dilatation is most probably associated with an improved clinical result and intravascular imaging might be useful for further improvement.