

vascular lumen $p < 0.05$) are significantly decreased in both RES group and RPES group than those in BMS group $p < 0.05$). However, there is not statistical significance in the most thickness, area of endarterium and the area of vascular lumen between RES group and RPES group.

- The expression of Egr-1 mRNA, not Egr-1 protein, is found in normal vascular section. Compared with normal vascular section, the expression of mRNA and protein of Egr-1 were significantly increased $p < 0.05$) in BMS group; however, their expression were significantly decreased in PES group and RPES group than that in BMS group (all $P < 0.05$).
- There exist expression of NF- κ B mRNA and its protein in normal vascular section. Compared to normal vascular section, the mRNA and the protein of NF- κ B were significantly increased $p < 0.05$) in three stent group (all $p < 0.05$). However, their expressions are significantly decreased in RES group and RPES group than those in BMS group (all $p < 0.05$).

Conclusions Blending rapamycin and paclitaxel eluting stent effectively prevents the restenosis, Egr-1 and NF- κ B mediated the proceeding of in-stent restenosis.

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THE ANTI-RESTENOSIS EFFECTS OF RAPAMYCIN AND PACLITAXEL ELUTING STENT IN SUSSCROTA DOMESTICA CORONARY ARTERY

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Objectives To elucidate whether rapamycin and paclitaxel eluting stent (RPES) can prevent the development of restenosis after stent embedding coronary artery of *susscrota domestica* for 4 weeks. In addition, it was further elucidated whether RPES influences the proceeding of in-stent restenosis (ISR) by the expression of both early growth response factor-1 (Egr-1) and nuclear factor κ B (NF- κ B).

Methods According to the ratio of stent versus artery (diameter 1.1–1.2:1.0), 30 stents (diameter 2.0 mm and length 15 mm; each group: $n=10$), including bare metal stent (BMS), rapamycin eluting stent (RES, dosage 0.05 mg/every stent), rapamycin and paclitaxel eluting stent (dosage 0.05 mg/every stent, the ratio of rapamycin:paclitaxel=1.0:1.0) blended by reshaping polylactic glycolic acid (PLGA), were randomly implanted in the anterior descending coronary or circumflex branch coronary. After 4 weeks, coronary arteriography was finished and the specimens were drawn, the quantity of coronary artery (QCA) was estimated by measuring the average vascular diameter, vascular loss and radial restenosis. The most thickness, area of endarterium and area of vascular lumen embedded were measured by stent eosinophilic staining. Both Egr-1 and NF- κ B were semi-quantitated by Rt-PCR or western blotting.

Results

- Compared to BMS group, the average vascular diameter is significantly improved $p < 0.05$), both vascular loss $p < 0.05$) and radial restenosis $p < 0.05$) are not found in both RES group and RPES group; there are not marked significance in average vascular diameter between RES group and RPES group ($p > 0.05$).
- There are a complete coverage of inner membrane on stent in three groups; both the most thickness $p < 0.05$) and the area of endarterium $p < 0.05$) are significantly improved and the area of