

Segment classification of proximal right coronary artery in consideration to coronary shape and motion

[Purpose] A platform of drug-eluting stent (DES) should be chosen depending on the shape and motion of coronary artery, which is the target of PCI. Stent fracture (SF) has been more common especially in proximal RCA, and a platform changing the shape of coronary artery may cause of restenosis in the segment. Therefore, it is necessary to classify the segment of proximal RCA in consideration to its shape and motion. [Methods] Proximal RCA consists of horizontal portion and bent portion. Horizontal portion is origin from the aorta, toward right atrioventricular groove. Bent portion traveling through atrioventricular groove perform flexion movement by beating. The length of the horizontal portion and bent portion were measured by analyzing coronary computed tomography at the diastolic phase in 100 cases. Then the 3-dimensional angle of the bent portion were measured in volume rendering image and vessel stretch image. [Results] The angle of proximal RCA is  $99.9 \pm 30.8$  (degree) in diastolic phase, and the length of the horizontal portion is  $11.1 \pm 4.8$  (mm), the bent portion is  $15.8 \pm 4.8$  (mm). [Conclusion] PCI of ostial lesion like proximal RCA were difficult to keep the long-term performance. Therefore, PCI should be performed on the anatomical background, and a platform of DES will be chosen correctly.