

A bailout technique using guiding extension catheter for nondeflated balloon trouble.

Background: The trouble that balloon cannot be deflated happens rarely during percutaneous coronary intervention (PCI) procedure. However, if once the situation occurs, it can cause unexpected results for patient and PCI operator. Some troubleshooting ways have been reported previously, including the use of tip-cutting guiding catheter. We investigated whether two extension guiding catheters were useful as the solution: GUIDEZILLA(Boston Scientific) and Guideliner(Japan Lifeline).Methods and results: The examined PCI systems were following: 6Fr.guiding catheter, 0.014inch guidewire, semi-compliant balloon and stent delivery system and non-compliant balloon. Acrylic tubes were used as coronary artery model. To rupture balloon effectively, we cut the tip of GUIDEZILLA vertically because this has woven blades in itself just like guiding catheter. In contrast, the tip of Guideliner was cut diagonally because this have another structure. After that, we examined whether these catheter could rupture two types of inflated balloons in acrylic tube. As a result, both catheters were able to rupture inflated semi-compliant balloons in all cases. However the success rate in stent delivery balloons was limited to 63% in the case of GUIDEZILLA&, 86% in the case of Guideliner. In non-compliant balloon, 60% in the case of GUIDEZILLA, 83% in the case of Guideliner.Conclusion: These new guiding extension catheters have a possibility to be useful as a bailout technique, when balloon cannot be deflated unexpectedly.