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The characteristics of the plaque, there are cases where the workhorse guidewire (GW) may enter the false lumen, making the procedure difficult. If the procedure is continued without noticing this, dissection or hematoma may increase, sometimes making bailout difficult.

Case: A 79-year-old woman with a history of old myocardial infarction presented with exertional chest pain. Coronary angiography revealed severe stenosis in the left anterior descending artery (LAD) with tortuous vessel. The procedure was started by 6Fr system. The first guidewire (GW) inadvertently entered the subintimal space, and angiography-guided crossing attempts failed. IVUS imaging showed that the wire had entered a false lumen with severe compression of the distal true lumen. A stent was deployed proximally to prevent further propagation of the dissection, but the distal dissection remained unresolved. As bailout procedure was not possible with the current setup, the system was changed to 8Fr. We performed IVUS-guided parallel wiring. 1st GW with AnteOwl WR IVUS was advanced into the subintimal space, and 2nd GW with microcatheter was successfully advanced into the true lumen. Stenting was performed, and satisfactory antegrade flow was restored.

Conclusion: This case demonstrates that IVUS-guided procedure is not only useful in standard CTO procedures but also effective as a bailout strategy in cases with subintimal dissection and complex anatomy.