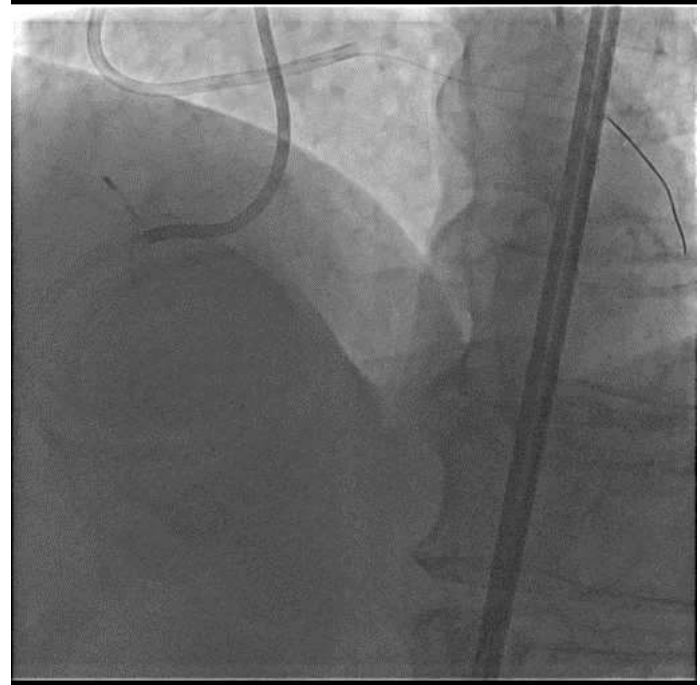


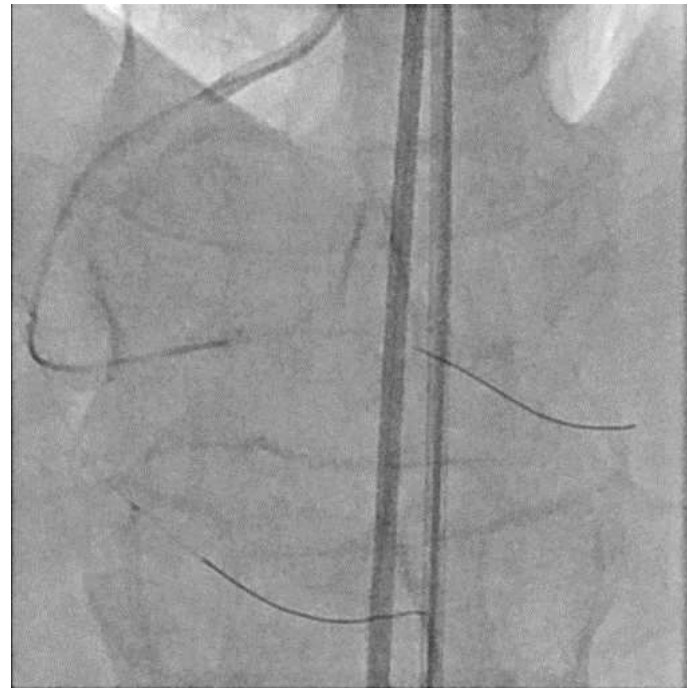
Managing complications in a micro-uncrossable Reverse-CART case

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- A 56 years old man with a right coronary artery chronic total occlusion and ischemia in the inferior region in myocardial perfusion scintigraphy was scheduled for retry percutaneous coronary intervention after the first failed antegrade attempt.



- The J-CTO score was 3. First antegrade approach was chosen again and various CTO wires were used respectively with the support of a microcatheter in order to pass the CTO body antegradely.
- Unfortunately, the wire was always out of the vessel structure despite the support of a AL2 catheter and an anchor balloon in the RV branch.



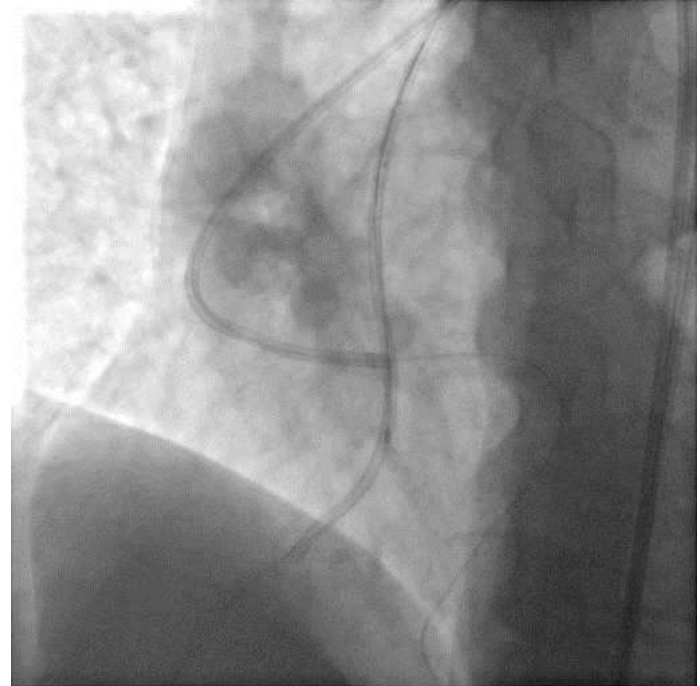
- The antegrade wire was left in place and the procedure was switched to retrograde approach by wiring the second septal branch.
- Another CTO wire could pass the cto body retrogradely and be advanced into the antegrade AL2 guiding catheter via reverse-CART technique.



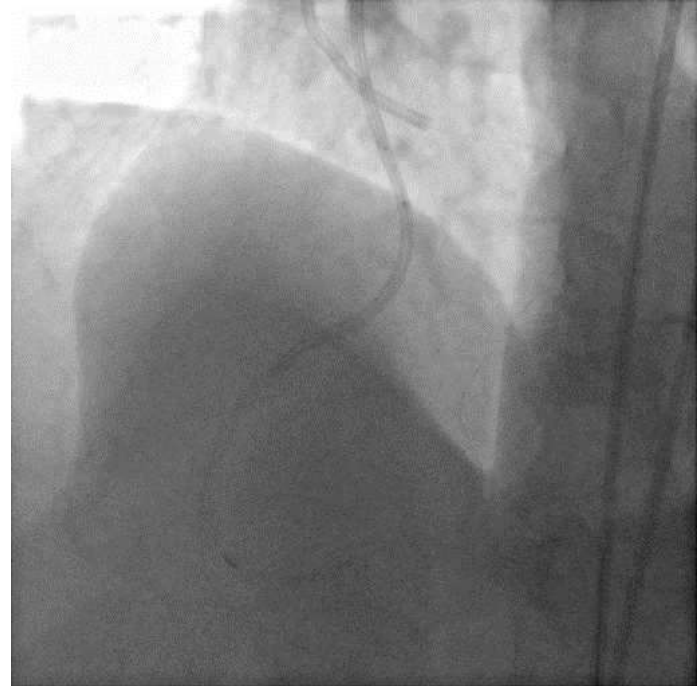
- However, the microcatheter stopped at the CTO body and could not be advanced further despite the trapped wire in the antegrade catheter.



- Moreover tip-in technique did not work since the antegrade microcatheter could not be advanced as well.



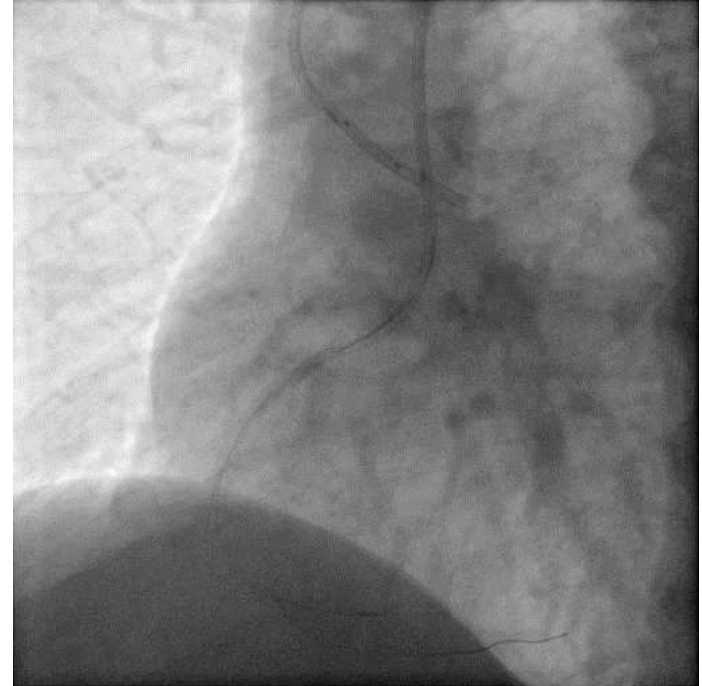
- The microcatheter was stuck in the CTO body and could not be retracted backwards as well.
- After repeated forceful attempts, the microcatheter could be retracted but it was noticed that the fractured tip of the microcatheter remained in place.
- The fractured microcatheter was fully taken out in order to advance a new microcatheter over the wire in place.



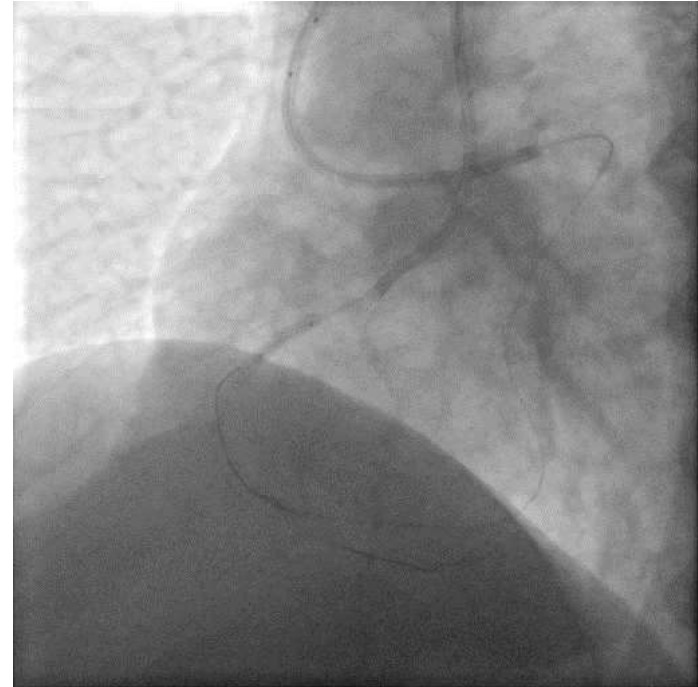
- A 1.25x15 mm balloon was advanced over the retrograde wire and inflated at 10 atm in order to make an easier path for the new microcatheter.



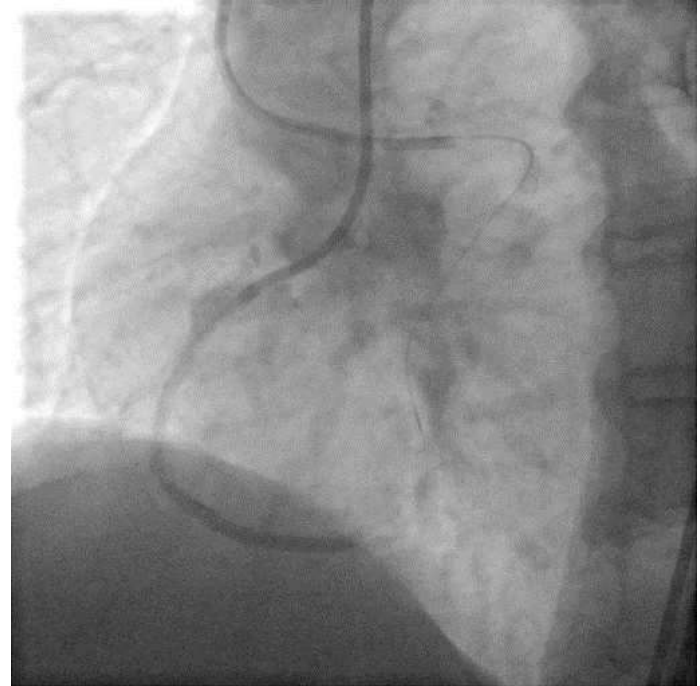
- The new microcatheter could be advanced a bit further by pushing the fractured microcatheter tip to the side but could not be advanced till to the antegrade guiding catheter despite forceful maneuvers.
- At that point, it was decided that the advanced wire was passing through a very calcified segment that does not allow the microcatheter to go forward.
- Hence it was decided to puncture the CTO cap at a different point.



- The wire was taken out and a new CTO wire could be advanced throughout a different part.
- Again, tip of the wire tended to remain in the subintimal space.
- A 2x12 mm balloon was inflated on the antegrade wire at the proximal segment of RCA while the retrograde wire was being pushed in order to perform reverse-CART technique.



- The retrograde wire then could be advanced into the antegrade AL2 guiding catheter and subsequently, the new microcatheter could also be advanced.
- After advancing the microcatheter into the antegrade AL2 guiding catheter, externalization was performed via a dedicated long wire.
- Stenting was performed following adequate predilatations by jailing the fractured microcatheter tip to the side of the vessel.



- Herein there are two main learning points.
- Firstly, if microcatheter can not be advanced over a wire, puncturing another point can be helpful when dilatations with low profile balloons fail in retrograde approach.
- Secondly, it is safe to jail a fractured microcatheter tip by stenting.

