A Useful Trick for Difficult Transseptal Access During Cryoballoon Ablation for Atrial Fibrillation

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ABSTRACT: A 76-year-old man with history of coronary artery bypass graft surgery was referred to our department for cryoballoon ablation of symptomatic drug-resistant paroxysmal atrial fibrillation. Thick septum can complicate such procedures; we describe a useful maneuver to circumvent this problem.

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A 76-year-old man with previous coronary artery bypass graft surgery was referred to our department for cryoballoon (CB) ablation of symptomatic drug-resistant paroxysmal atrial fibrillation (AF).

Case Report. After positioning a deflectable decapolar catheter (Biosense Webster) in the coronary sinus (CS), a single transatrial access was obtained. A standard transseptal (TS) assembly (BRK-1, SL0 sheath; St Jude Medical) was advanced and positioned successfully in the left atrium (LA). Then, a 0.32 Fr Emerald exchange wire (Cordis Corporation) was positioned into the left superior pulmonary vein (LSPV) and the sheath dilator assembly retracted out of the patient’s groin. The latter was exchanged with a 15 Fr outer diameter sheath (FlexCath; Medtronic Corporation). Advancing the FlexCath was possible until the sheath-dilator tapering reached the septum. Various maneuvers, such as orientating the sheath more posteriorly, more anteriorly, and bending the shaft and waiting while applying pressure, were attempted without success (Figure 1A, white arrow). Before exchanging the guidewire with a stiffer one, we decided to attempt a last maneuver. The FlexCath dilator was retracted to the right atrium with the guidewire safely positioned in the left superior pulmonary vein (LSPV). Then, the steerable decapolar catheter was retracted from the CS and inserted through the previously acquired access in the LA using a 45° left anterior oblique projection. It was then (C) bent maximally and (D) pulled down in order to widen the TS access. (E) Successful advancement of the FlexCath sheath into the LA. (F) A 28 mm CB ablation was then carried out without periprocedural complications. FO = fossa ovalis; FC = 15F-FlexCath.

Discussion. In some cases, advancement of a big diameter sheath in the LA might prove challenging. This is particularly true when dealing with thick septa. The resistance of the septum can potentially lead to a higher risk of complications due to the increased force when pushing the TS apparatus across the FO and into the LA. Facilitating this maneuver by means of a steerable catheter placed through the TS access might be helpful and safe in these cases.