

■ Brief Report ■

経皮的塞栓治療に難渋した両側先天性冠動脈瘻の一例

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Struggling transcatheter closure of congenital bilateral coronary arteriovenous fistula

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Abstract We report a 4-year-old boy with congenital coronary artery fistula (CAF) in whom the coronary artery was unexpectedly shrunk during transcatheter closure. The patient underwent transcatheter closure because of dilated bilateral CAFs. Selective coronary angiography showed that one CAF drained from the right coronary artery (RCA) into the right ventricle (RV) with the maximum diameter of 11.2 mm and the other CAF also drained from the left circumflex artery into the RV with the maximum diameter of 5.4 mm. A 5Fr-guiding sheath was introduced retrograde from the RV to the RCA, however, could not pass through the narrow part of the orifice. Though we attempted to deploy a 12-mm Amplatzer Vascular Plug-II® (AVP), the device was not appropriately positioned and the RCA was unexpectedly shrunk after several attempts. Alternatively, we applied antegrade approach and could successfully close the CAF using a 12-mm AVPII.

Key words congenital bilateral coronary arteriovenous fistula, shrinking, percutaneous transcatheter closure

症 例

4歳男児。生後心雑音から冠動脈瘻 (CAF) と診断。1歳3か月時の心臓カテーテル検査で肺体血流比1.9, 右冠動脈 (RCA) と左回旋枝 (LCX) が右室下壁へ流入する遠位型両側CAFと診断した。選択的冠動脈造影でRCA, LCXは最大径11.2mm, 最大径5.4mmと拡大していた (Fig. 1A, B)。RCAの右室開口部最小径10.5mmにAmplatzer Vascular PlugII® (AVPII; Abbott Vascular, Santa Clara, California, USA) 12mm使用の方針とした。動脈側から5Fr JRカテーテル内を先端可動型マイクロカテーテル (LEONIS MOVA® 住友ベークライト, 東京) を進め右室に出した。静脈側から右室に通した10mmグースネックスネアワイヤー (Amplatz Gooseneck Snare™, Medtronic, Minneapolis, MN, USA) で、LEONIS MOVAの先端を把持し0.014インチガイドワイヤー

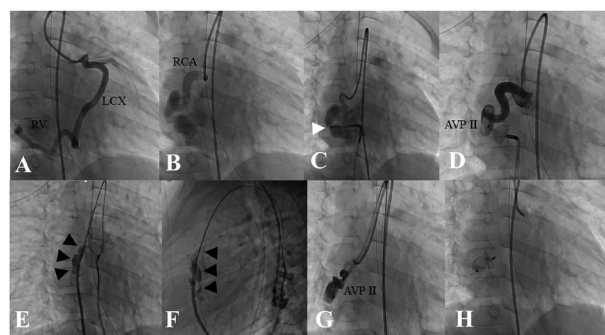


Fig. 1 Selective coronary angiography showed CAF from the LCX to the RV (A) and another CAF from the RCA to the RV (B). A 5Fr-guiding sheath was introduced retrograde from the RV to the RCA, however, could not pass through the narrow part (white arrowhead) of the orifice (C) and AVPII was not appropriately positioned (D). After several attempts, the RCA was unexpectedly shrunk (black arrowheads) [anterior (E) and lateral view (F)]. Alternatively, we could successfully deployed AVPII antegrade approach (G) and close CAF (H).
Abbreviations: AVP II, Amplatzer Vascular Plug II®; CAF, coronary artery fistula; LCX, left circumflex artery; RCA, right coronary artery; RV, right ventricle

(Aguru™, Boston Scientific, Marlborough, MA, USA) を通した。大腿静脈より5Frガイドリングシース (Parent Plus®, 東郷メディキット, 宮崎) をRCA内へ進めた。しかし、ガイドリングシースが最狭窄部を通過せず (Fig. 1C), AVPIIを展開したが何度も右室内に脱落し (Fig. 1D), その後RCAが攣縮した (Fig. 1E, F)。最終的に順行性と同じシステムでAVPII 12mmを留置した (Fig. 1G, H)。冠動脈側枝閉鎖や心電図変化はなかった。

考 察

曲がりくねり瘻孔部分と右室開口部の流入部の角度が急峻なCAFでは、経皮的閉鎖術の際には冠動脈自体の圧縮や伸展に留意すべきである^{1,2)}。

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