

F-E10

## 미성숙 혈액투석 동정맥루에서 혈관 중재시술에 의한 치료

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### Endovascular Salvage of Immature Hemodialysis Arteriovenous Fistulae

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**Purpose:** To assess the anatomical causes of immature hemodialysis arteriovenous fistula (AVF) and the outcome of the endovascular salvage.

**Methods:** Over a 4-year period, 51 dysfunctional and 3 thrombosed immature AVF were treated by endovascular intervention, which included percutaneous transluminal angioplasty and accessory vein obliteration by coil insertion or surgical ligation. Anatomical causes, clinical characteristics and the success rate of the endovascular salvage of the immature AVF were retrospectively analyzed.

**Results:** The access types were 27 radiocephalic fistulae, 25 brachiocephalic fistulae, and 2 transposed basilic vein fistulae. Mean interval from access creation to referral to angiography was 116 days (44-349 days). Anatomic problems were identified in 53 cases (98%). The causes of the immature AVF were stenosis (59%), accessory vein (22%), and combined stenosis and accessory vein (15%) and deeply located vein (4%) in the upper arm fistulae, and stenosis (67%), accessory vein (11%), combined stenosis and accessory vein (11%), poor surgical technique (7%), and deeply located vein (4%) in the forearm fistulae. New fistulae were created in the cases of immature AVF due to poor surgical technique, and surgical superficialization was done in the cases of deeply located veins. In the remaining cases, overall clinical success rate of endovascular salvage was 94.4%.

**Conclusion:** Immature AVF should be timely treated, because the most common causes are stenosis and accessory vein. Endovascular intervention can treat majority of cases with high success rate.

**Key Words:** 혈액투석, 동정맥루, 혈관확장술

Hemodialysis, Arteriovenous fistula, Angioplasty