EFFICACY OF EXPANDABLE HYDROGEL POLYMER COIL EMBOLIZATION FOR AORTOPULMONARY COLLATERAL ARTERY. -EFFICACY FOR REDUCTION OF NUMBER OF COILS AND PREVENTION FOR RECANALIZATION

Tomohito Kogure / Hisashi Sugiyama / Tetsuko Ishii / Junichi Yamaguchi / In-sam park / Nobuhisa Hagiwara
Tokyo Women's Medical University, Tokyo, Japan

BACKGROUND
Aortopulmonary collateral arteries (APCA) in single ventricular physiology is related to plural effusion or ICU stay period after TCPC. Although coil embolization is effective for those, it requires a large number of coils. In addition, bare platinum coil often causes recanalization. Expandable hydrogel polymer coil (AZUR®) has unique characteristics represented by greater filling with fewer coils and is expected to prevent recanalization.

OBJECTIVE
Reduction of the number of coils and prevention from recanalization by AZUR coil are retrospectively evaluated.

METHODS
Study I: Total 11 vessels in 7 patients underwent coil embolization with AZUR for de novo APCAs from internal mammary artery (IMA) (AZUR group). They were compared with age matched patients who were treated with bare platinum coil (control group).
Study II: In 2 patients, AZUR was deployed in recanalized APCAs which have been previously treated with bare platinum coils. One patient had racemose hemangioma of the bronchial artery with fatal recurrent hemoptysis.

RESULTS
Study I: The mean age of the patients were 5.6 years (2-17) and the mean diameter of IMA was 2.5 mm (2.0-2.8 mm). The number of coils was fewer in AZUR group as compared with control group (4.3±1.8 vs 6.5±2.8, P=0.04).
Study II: Complete occlusion by AZUR was demonstrated in both patients. Recurrent hemoptysis was stopped 2 years after coil embolization in the child with racemose hemangioma.

CONCLUSION
AZUR could contribute to reduce number of coils in APCAs and also be effective against recanalization even in Racemose hemangioma.