We report successful transcatheter aspiration of thrombus combined with percutaneous transluminal angioplasty (PTA) for an infant complicated by superior vena cava (SVC) obstruction in postoperative period presenting critical SVC syndrome. After fetal diagnosis of transposition of great arteries with restrictive atrial communication, the patient was delivered in the 38th week and performed balloon atrial septostomy immediately after birth. However, the patient was complicated with persistent pulmonary hypertension (PPHN) and presented with severe cyanosis. Extracorporeal membrane oxygenation had been needed for two weeks to get rid of PPHN. An arterial switch operation (ASO) was performed sixteen days after birth, while pleural effusion persisted after ASO. Severe chylothorax was emerged on the thirty-sixth days of his life, while central venous pressure was elevated acutely followed by severe edema in the head, neck and upper limbs, which suggested acute SVC obstruction. After confirming the complete occlusion of SVC by venography, a Radifocus® guide wire was passed through the site of occlusion, over which PTA was performed. After PTA, venography showed residual stenosis and thrombus on the vessel wall. We advanced the sheath introducer from right jugular vein to the stenotic site and aspirated thrombus using the sheath. After removing a lot of thrombi, final venography showed no residual stenosis and thrombi. Fifty-six days after thrombectomy, venography revealed sufficient patency of SVC. SVC obstruction in early infancy may be difficult to maintain patency and require frequent interventions. Combination of PTA and transcatheter thrombectomy may be feasible choice immediately after the obstruction of SVC.

Case Summary:

We report successful transcatheter aspiration of thrombus combined with percutaneous transluminal angioplasty (PTA) for an infant complicated by superior vena cava (SVC) obstruction in postoperative period presenting critical SVC syndrome. After fetal diagnosis of transposition of great arteries with restrictive atrial communication, the patient was delivered in the 38th week and performed balloon atrial septostomy immediately after birth. However, the patient was complicated with persistent pulmonary hypertension (PPHN) and presented with severe cyanosis. Extracorporeal membrane oxygenation had been needed for two weeks to get rid of PPHN. An arterial switch operation (ASO) was performed sixteen days after birth, while pleural effusion persisted after ASO. Severe chylothorax was emerged on the thirty-sixth days of his life, while central venous pressure was elevated acutely followed by severe edema in the head, neck and upper limbs, which suggested acute SVC obstruction. After confirming the complete occlusion of SVC by venography, a Radifocus® guide wire was passed through the site of occlusion, over which PTA was performed. After PTA, venography showed residual stenosis and thrombus on the vessel wall. We advanced the sheath introducer from right jugular vein to the stenotic site and aspirated thrombus using the sheath. After removing a lot of thrombi, final venography showed no residual stenosis and thrombi. Fifty-six days after thrombectomy, venography revealed sufficient patency of SVC. SVC obstruction in early infancy may be difficult to maintain patency and require frequent interventions. Combination of PTA and transcatheter thrombectomy may be feasible choice immediately after the obstruction of SVC.
**Interventional Management**

**Procedural step:**
We passed the occluded segment with Grandslam Ashahi 0.014” guide wire, and then did staged balloon angioplasty with 1.2mm and 2.5mm coronary balloon. Finally we put the 4mm*12mm stent at the occluded segment successfully.

**Relevant test results prior to catheterization:**
The chest X-ray showed CT-ratio of 0.7 with a huge main pulmonary trunk. ECG demonstrated right axis deviation, presence of rsR’ in V1, ST depression in right precordial leads. CT-angiogram showed inlet-perimembranous VSD 24 mm with bidirectional flow, PDA 12 mm with bidirectional flow, severe juxta-ductal COAT and very huge MPA compressed left main bronchus. Echocardiographic findings were similar to CTA and also confirmed a systemic pulmonary arterial pressure with severe right ventricular hypertrophy.

### TCTAP C-130

**Stepwise Therapy for Severe Coarctation, PDA and Large VSD with Severe PAH**

**Worakan Promphan**

**Queen Sirikit National Institute of Child Health, Thailand**

**[Clinical Information]**

**Patient initials or identifier number:**
1. A. Joan
2. K. Maed

**Relevant clinical history and physical exam:**
1. PDA with gr 1-2 continuous murmur
2. PDA with gr 2 continuous murmur

**Relevant test results prior to catheterization:**
1. PDA very small, no PHT
2. Relatively large PDA with peak PAP = 60mmHg

**[Interventional Management]**

**Procedural step:**
Case 1
Due to very limited material, we decided to use ADO 6-4 via delivery sheath 6 fr. But the delivery sheath could not pass through PDA. We tried to snare the PDA aortic tip and made it pass the PDA, itself. Successful implantation was done.

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**TCTAP C-131**

**PDA Closure in a Special Circumstance**

**Jin Young Song**

**Samsung Medical Center, Korea (Republic of)**

**[Clinical Information]**

**Patient initials or identifier number:**
1. A. Joan
2. K. Maed

**Relevant clinical history and physical exam:**
1. PDA with gr 1-2 continuous murmur
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**Relevant test results prior to catheterization:**
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**[Interventional Management]**

**Procedural step:**
Case 1
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