A 13-year old girl, who had undergone arterial switch operation using the Lecompte manoeuvre for TGA, developed aorto-pulmonary fistula derived from the balloon angioplasty for pulmonary artery (PA) stenosis (Fig. 1A–C).

Because the adhesive tissue prevented cardiac tamponade, elective surgical repair including PA reconstruction using a composite graft was successfully done several days after recovering from acute heart failure (Fig. 2A–C).

Figure 1: (A) Bilateral PA stenosis in the preoperative status (white arrow head); (B) chest CT showed aorto-pulmonary fistula (white arrow head), but no pericardial effusion; (C) under cardiopulmonary bypass and aortic clamping, the fistula was easily detected (black arrow head) in the posterior wall of PA. PA: pulmonary artery; CT: computed tomography.

Figure 2: (A) The composite graft preoperatively was made with ringed expanded poly tetrafluoroethylene grafts (20 mm; main trunk, 12 mm; each branch), depending on the location of PA trunk and its branch; (B) and (C) postoperative 3D-CT (anterior and lateral view), the shape of the graft was smooth and no kinking appeared at the branches. PA: pulmonary artery; CT: computed tomography.