

Cardiopulmonary Bypass Without Homologous Blood Transfusion In Low Weight Patients

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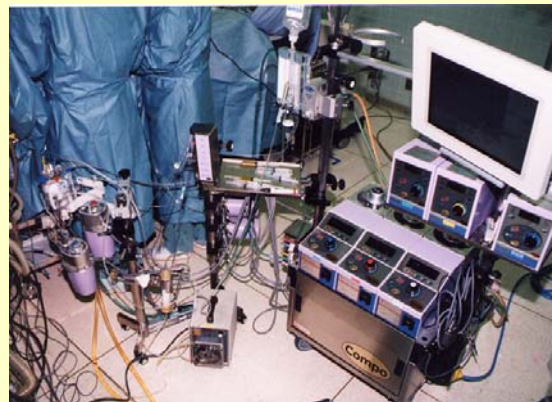
Yukihiro Takahashi, MD

Sakakibara Heart Institute was established in 1977 as an institute specially for cardiovascular surgery. Together with Tonokura Ika Kogyo Co., Ltd. (Tokyo, Japan), they have developed a heart-lung system with a pump head separable from the controller.

Sakakibara was the first institute to apply the new system clinically, and under Dr. Yukihiro Takahashi, they are aggressively performing their cardiopulmonary bypass without homologous blood transfusion.

1. SYSTEM (Patients under 6.0kg)

- Heart-Lung Machine: Technowood CompoIII (Sakakibara Type) BP75cIII_6
- Tubing Set : Technowood Custom Tubing Pack Sakakibara type (SSS, SSSS)
- Oxygenator : Polystan Safe Micro
- Total Priming Vol. : 180ml up to 4.5kg (130ml without Arterial Filter)
 230ml up to 6.0kg (195ml without Arterial Filter)



2. CASES

Among 1,165 pediatric cases who underwent open heart surgery with bloodless priming from July 1994 to Feb. 2001, 1,088 cases (93.4%) were operated without homologous blood transfusion.

Acyanotic	Jul. 1994~Feb. 2001		Cyanotic	Jul. 1994~Feb. 2001	
ASD	99%	224/225	TOF	97%	127/131
VSD	98%	440/451	Rastelli	84%	31/37
Incomplete AVSD	100%	41/41	Fontan	79%	50/63
Complete AVSD	93%	26/28	Open Palliation	83%	54/65
Valve, Re-OP, etc.	75%	86/115	AVSD with TOF	100%	9/9
TOTAL	95%	817/860	TOTAL	89%	271/305

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