

CO and 2.3(1.4) l/min with PRAM-CO. The mean bias was 0.2 l/min with agreements limits -2.4 and 2.8 l/min. Pearson's correlation was 0.29 giving a percentage error of 108%. In the group with median BSA < 1.10 m² ($n=26$, 131 measures), mean CO was 1.9 (0.7) l/min with TEE-CO and 1.8(0.6) l/min with PRAM-CO. The mean bias was 0.03 l/min with agreements limits -1.06 and 1.13 l/min. Pearson's correlation was 0.64 giving a percentage error of 60%.

Conclusions.— Differences between PRAM and TEE were significant at all ages and BSA. These results do not support the use of the Mostcare[®] monitor to evaluate CO in the setting of pediatric cardiac surgery.

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Children waiting for heart transplantation: Interest of levosimendan

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Introduction.— Heart transplantation is the gold standard therapy for pediatric end-stage heart failure. Sometimes, the waiting time for a transplant may be long and a mechanical support is required despite the use of conventional inotropic drugs. Levosimendan was proved to be safe and efficient for the treatment of postoperative low cardiac output syndrome in children.

Aims.— To evaluate the effects of levosimendan in children who are waiting for heart transplantation.

Patients and methods.— In this single-center retrospective study, all the pediatric patients (under 18 years) in end-stage heart failure and with criteria for mechanical support, were included. All the patients were on the waiting list for heart transplantation. Each patient received at least one 24-hour infusion of levosimendan until either heart transplantation or mechanical support initiation. Clinical, biological and echocardiographic data were analyzed according to the infusions of levosimendan.

Results.— A total of six patients were included over a period of 24 months. The median age was 2 years (2 months–15 years). A total of 82 infusions were performed. Levosimendan had a positive effect on enteral feeding. The median BNP level decreased significantly between day 0 and day 2 (2443 ng/L [1458–3819] versus 1358 ng/L [1025–2534], $P=0.003$). While only a trend was noted in the improvement of the left ventricular ejection fraction ($P=0.054$ by the Simpson's method and $P=0.068$ by the Teicholz method), the subaortic velocity time integral was significantly improved between day 0 and day 8 (12.8 cm/s [10–14.5] versus 15.3 cm/s [14.3–16.9], $P=0.041$). Even if the efficacy of levosimendan seemed to progressively decrease over the time, the use of this drug allowed an average lifetime without mechanical support of 177 days. During this study, no adverse events have been reported, or attributed, to the use of levosimendan.

Conclusion.— Levosimendan improves hemodynamics in children in end-stage heart failure, allowing several months of life without mechanical support. This study argues for a systematic use of levosimendan, in addition to the usual inotropic drugs, in this context. Levels of BNP, quality of enteral feeding and echocardiographic parameters may help to determine the best timing for infusions.

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transplant patients: A national survey

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Introduction.— Rejection following cardiac transplant remains an important cause of morbidity and mortality as well as the complications of the immunosuppressive therapy. Thus, surveillance of paediatric heart transplant patients is crucial to prevent these risks or, at least, to allow an early treatment. However, only few international guidelines have been established concerning the modalities of this monitoring.

Aims.— To collect and to compare the different practices of paediatric heart transplant surveillance in France.

Patients and methods.— It was a descriptive multicenter study. Each French paediatric cardiologic centres was contacted by e-mail to complete an electronic questionnaire.

Results.— Eight centres were involved in the surveillance (including seven centres performing paediatric heart transplantation) of these patients. The average number of followed patients was 16.1 (2–50) per centre. The average number of involved physicians was 3.7 (1–8) including 38% of paediatric cardiologists. Only two centres had a devoted nurse for this activity. Echocardiography was considered to be reliable for the early detection of transplant rejection by 57% of centres. Isovolumic relaxation time was always collected. Whereas TM measurements were frequently analyzed, other Doppler measurements were inconsistently reported. Myocardial strain analysis (using speckle tracking method) was almost never performed (14%). Coronarography was systematically performed in 43%, coronary CT angiogram in 28% and cardiac MRI in 14%. For patients aged above 1 year, cardiac biopsies were systematically performed in 86%. The prevention of the transplant coronary artery disease was conducted using pravastatin in 86%, aspirin in 28% and clopidogrel in 14%.

Conclusion.— The French practices for the monitoring of paediatric heart transplant patients are heterogeneous due to the absence of national guidelines. This study highlights the need for a national register to establish consensus for the management of these patients.

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Long-term survival and functional status of adult patients with Eisenmenger Syndrome

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