Results.— One hundred and seventy-three paired measurements were compared. The mean CO (SD) was 2.5(1.4) l/min with TEE-CO and 2.3(1.4) l/min with PRAM-CO. The mean bias was 0.21/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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32 Children waiting for heart transplantation: Interest of levosimendan

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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, allowing several months of life without mechanical support. This study argues for a systematic use in end-stage heart failure, allowing several months of life without mechanical support. This study argues for a systematic use of levosimendan until heart transplantation or mechanical support initiation. Clinical, biological and echocardiographic parameters may help to determine the best timing 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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33 Modalities of surveillance for the paediatric heart transplant patients: A national survey

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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 performed in 86%. 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.— 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.

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

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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, allowing several months of life without mechanical support. This study argues for a systematic use of levosimendan until heart transplantation or mechanical support initiation. Clinical, biological and echocardiographic parameters may help to determine the best timing 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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**Infective endocarditis in adults with congenital heart disease**

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**Background.** In the context of new target therapies, this study aimed to assess the functional status and long-term outcomes of patients with Eisenmenger Syndrome reaching adulthood.

**Patients and methods.** This is a single-centre retrospective review of all patients diagnosed with Eisenmenger Syndrome. Demographic, clinical data, underlying cardiac disease, functional status, therapeutics and outcomes were collected.

**Results.** One hundred and fifty-nine patients were included (94 females: 59%), aged 27.7 ± 14.8 years at end-follow up, and 60 with Down syndrome (38%). Underlying cardiac disease was: AVSD in 30%, VSD in 35%, ASD in 9%, PDA in 5%, associated shunts in 5%, complex CHD in 10%, left heart obstruction in 2.5%, pulmonary veins anomaly in 2.5% and TGA in 1%. CHD was native in 122 cases (77%), seven had palliation (4%) and 30 complete repair (19%). Pulse oxygen saturation was 84 ± 12% (range 44 to 98%), lower in non-operated or palliated cases (81%) than in repaired cases (92%, P = 0.002). Patients were in NYHA class I (18%), class II (42%), class III (37%) or IV (3%), not different with previous repair or not. Target therapy agents were given in 35% of the cases (one agent in 20%, two associated in 13%, intravenous epoprostenol in 1.5%). Death occurred in 26 patients (16%) at the age of 29.3 ± 17.8years. Complications occurred in most of the cases (64%) including: hemorrhages events, syncope, thrombo-embolia, cerebral abscess, infective endocarditis, heart failure or arrhythmias. NYHA class did not differ between patients with or without target therapy. SpO2 was 82% in untreated cases compared to 86% in treated cases (NS). Survival rates were: 98% at 10-years, 93% at 20-years, 87% at 30-years, 83% at 40-years, 73% at 50-years and 53% at 60-years of follow-up. Survival was lower in Down patients (P = 0.0023), in males (P = 0.04) and tends to be higher up to 50-years of age in patients under target therapy (P = 0.05).

**Conclusion.** The survival rate of adult patients with Eisenmenger Syndrome seems to improve up to 50 years of age with target therapeutics and outcomes were collected.

**36 Preoperative Staphylococcus aureus carriage and risk of surgical site infection after cardiac surgery in children: A pilot cohort study**


**Background.** Infective endocarditis (IE) may adversely impact the outcome of IE in ACHD. The aim of this study was to assess the features and outcome of IE in ACHD.

**Patients and methods.** Design is a single centre retrospective chart review of IE episodes in patients with CHD reaching adulthood (ACHD). The aim of this study was to assess the features and outcome of IE in ACHD.

**Results.** From 1980 to 2011, 33 patients were included, mean age 29 years at IE (range 18 to 76). Underlying CHDs were: native VSD in 22%, cyanotic CHD in 35%, AVSD in 6%, aortic valve lesion in 22% and miscellaneous in 10%. CHD was repaired in 19%, palliated in 27% and non-operated in 54%. Thirty percent had received antibiotics prior to IE diagnosis. Heart failure occurred in 22% of cases, septic shock in 11%, neurological complication in 1%, splenomegaly was present in 46% and fever in 100% of cases. Source of infection was dental in 35%, cutaneous in 25%, ENT in 5%. The microbial causal agent was Staphylococcus in 46% and Streptococcus in 32.5%, unknown in 8%. Echocardiographic vegetations were found in 49% of the cases, valves perforation or abscesses occurred in 11% and 24%. Embolic events were frequent (62%). Surgery was performed in 30% of cases, a median of 21 days after onset of IE (1 day to 5 months). Hospital stay was 2 weeks to 6 months. Mortality was 11% and two cases recurred.

**Conclusion.** IE severely impacts the prognosis of ACHD, especially in patients with cyanotic CHD. Embolic events are frequent complications. Prophylaxis should mainly focus on cutaneous and dental procedures.

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**37 Cardiovascular involvement in Kawasaki disease in Algerian children: Our experience**

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**Background.** Kawasaki disease (KD) is an acute, self-limiting vasculitis of unknown etiology. The incidence of KD is increasing worldwide. However, there is a lack of data on Kawasaki disease and its effect on coronary arteries in Algeria and other developing countries.

**Objective.** To describe the pattern of cardiovascular involvement in Algerian children admitted with Kawasaki disease and to highlight the practical difficulties.