

Title: Pediatric cardiac surgery in Morocco: An anesthetic point of view

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Introduction: The vast majority of Moroccan children with congenital cardiac disease remain without treatment because of lack of specialized resources and/or financial means to pay for interventions. A Canadian team of 12 physicians, technicians and nurses spent 2 weeks in Casablanca to help to treat children while providing continuing education to the Moroccan pediatric cardiology/cardiac surgery community. We would like to portrait the local limitations when it comes to surgery, anesthesia and post-operative care and follow up. Comparison between Canadian and Moroccan medical reality will be discuss.

Clinical features : During a 2 week period, 96 children were evaluated clinically and underwent an echocardiogram. Fifteen patients, two adults (41 and 32 years) and 13 children with a mean age of 5.7 years (range =1 month and 17.5 years) and mean weight of 19 kg (range = 2.8 – 60 Kg) underwent surgical correction of congenital cardiac anomalies. Surgical interventions were performed with cardiopulmonary bypass (CPB) in 11 patients including repairs of Tetralogy of Fallot (4), Sinus venosus and secundum ASD (2), mitral valve disease (2), Aortic valve stenosis (1), Partial Atrio-ventricular Canal Defect (1), and a Ventricular Septal Defect in the smallest CPB patient weighing 7.5 kg. Four procedures were performed without CPB including 2 ductal ligations with pulmonary artery banding and a coarctation repair. The fourth off-pump procedure was an emergency pericardial drainage post-catherisation with dilation of the mitral valve performed with a per-auricular balloon, representing the first hybrid procedure in the country. There was no postoperative mortality and postoperative morbidity included reversible low cardiac syndrome in one patient and a pericardial effusion which was percutaneously drained. All patients were extubated in surgical suite. The mean intensive care stay of 2.1 days (range = 1 – 6 days) and a mean hospital stay of 8 days (range = 6 – 11 days).

Discussion: Pediatric cardiac surgery in developing countries is a major challenge (1). Our goal is to improve care for children with CHD and help establish local expertise which will over time increase the number of children treated. Careful surgical planification and preoperative patient selection accordingly to local resources, infrastructure, medical care provider expertise and post-operative follow up availability, can improve results. Initial low-cost and low-risk palliation and postponing definitive surgery to later date may be a strategy (2). Any thing that facilitates early extubation saves the cost of respiratory therapy and equipment and avoids ventilator-related charges. Early extubation can reduces complications and simplified post-operative care.

Conclusion: Despite late presentation and nutritionally challenged children, quality pediatric cardiac surgery and anesthesia is possible in developing countries with excellent results. Efforts should be continued to promote education of African teams to continue the treatment of children locally in their country.

References:

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