Editorial from Guest Editors

Children with Congenital Heart Disease

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INTRODUCTION

Just under 1% of all children are born with congenital heart disease. In earlier days many lesions were fatal but with advances in surgery and follow up, the outcome has improved enormously. Ever increasing numbers of children with surgically corrected congenital heart disease are growing up into childhood and adulthood. Whereas for many lesions the overall outcome will be excellent, the more complex lesions continue to be associated with some morbidity and even mortality during childhood and adulthood. Given the large number of subjects, all primary care physicians, pediatricians and adult physicians will come in contact with patients born after congenital heart disease. Some knowledge about their outcome and functionning is thus essential.

The most frequent long term complications following surgery for congenital heart disease remain intrinsic to the heart. Arrhythmia remains the primary contributing cause of death in survivors of cyanotic lesions but myocardial infarction is now the leading contributing cause for adults with noncyanotic congenital heart disease. The latter is consistent with later survival and an increasing impact of acquired heart disease in these subjects [1].

The impact of congenital heart disease or the surgery associated with it on the lung and the chest wall is well recognised. Since the chest wall and the lung determine gas exchange and the heart governs oxygen distribution, dysfunction of either organ may be associated with decreased exercise capacity.

In normal subjects the ventilator response to exercise is never a limiting factor for exercise performance. Also in general, pulmonary abnormalities in patients with congenital heart disease do not lead to a decreased exercise performance [2]. However, in some patients with multiple thoracotomies for surgical correction of a congenital heart defect (e.g. in tetralogy of Fallot with severe pulmonary regurgitation), a restrictive pulmonary function may be observed after surgery, which can lead to a reduced exercise tolerance.

The following chapters provide excellent insight into exercise testing and exercise performance with specific attention to the complex interaction between the heart and the lung during exercise. Furthermore a chapter is dedicated to chest wall complications following surgery and the impact this may have on functioning. And last but not least specific pulmonary complications after congenital heart surgery are discussed in detail.

REFERENCES

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