Distribution of Resources for Paediatric Cardiac Surgery

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Introduction

South Africa is a developing country with a per capita expenditure per year on health care of only about $158, versus that in Europe of approximately $2000. The Post Apartheid government's health focus has shifted from tertiary to primary health care, improving access to the majority of its citizens and concentrating on preventable infectious diseases. This re-allocation of the precious health care budget has forced all role players to rationalize health care expenditure. This is especially applicable to the management of paediatric cardiac surgery.

The advances made in obstetric and neonatal care over the past two decades has resulted in improved perinatal mortality. The use of prostaglandins, surfactant and improved ventilation has revolutionized neonatal care and therefore more patients with congenital cardiac defects are presenting for corrective surgery.

Complex Congenital Heart Defects

The global incidence of congenital heart disease ranges from 7.5 to 10.6 per 1000 live births[5] and those with complex congenital hearts are even smaller.

The surgical procedures attempted for these defects are both complex and are often only palliative in nature. These patients have protracted i.c.u stays and have a higher incidence of early and late morbidity and mortality. The mortality ranges from 19.4% to 47.7%.

These statistics bring into question the allocation of this resource.

Only 53% of cases were for simple defects, associated with a mortality rate of 4.2% and very short i.c.u stays. A further 22% of cases were for complex congenital defects and palliative surgery. Theses cases consume a disproportionate amount of the budget, because of their associated longer stays in i.c.u.

As with most disciplines there is a long waiting period for surgery. These patients have simple congenital defects and the longer they are delayed; the higher their risks for developing complications like pulmonary hypertension.

The mortality associated with the various groups of procedures is in keeping with those found in the literature. This implies that an acceptable level of surgical competence exists in the unit. It is imperative that we retain and maintain these skills.

Conclusion

The challenge we must embrace is the appropriate allocation of a scarce resource. Such decisions should be bases on meeting the following needs:

1. Providing high quality tertiary service
2. Triage and optimal use of resources
3. Maintaining academic excellence

Classification of Congenital Heart Defects at Johannesburg General Hospital[3]

	Non Bypass	*Bypass*
Simple Defects	PDA ligation	ASD +/- PAPVC
		VSD
		AV Canal
		Coarctation of Aorta
		Obstructive lesions
		TOF
Complex		Glenn Shunt
		Rastelli Procedure
		Arterial Switch
		RPA Stenosis
		TAPVC
		Mustard
		DORV + PS
		Common
		Atrium+VSD+Double Orifice TV
		Accessory MV tissue
Palliation		Tricuspid Atresia
		Pulmonary Atresia + VSD
		Multiple VSD's

Morbidity And Mortality Statistics For Paediatric Cardiac Surgery at Johannesburg General Hospital for 2002[3]

	Number	*Mortality*	*Mean ICU stay (days)*	*Mean Hospital stay (days)*
Simple congenital	71	4,2	2,0	5,0
Complex congenital	30	26,7	8,8	22,0
Acquired	32	7,6	3,0	7,0

References

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