Paediatric Transplantation

Where are we now?
Where are we going?

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• First procedure by Kantrowitz in 1967.
• Essentially abandoned in the 70s.
• Renewed interest with the advent of cyclosporin in 1980.
Paediatric Heart Transplantation

Indications

Current issues

Outcome
Paediatric Heart Transplantation

Indications

- Cardiomyopathy
- HLHS
- Other congenital defects
Paediatric Heart Transplantation

Current Issues

• Graft coronary artery disease
• Rejection diagnosis
Paediatric Heart Transplantation

Outcome

- Risk factors
- Survival
- Sequalae
Paediatric Lung Transplantation

• First successful single lung transplant 1963.

• For the next two decades all attempts ended in failure.

• Availability of cyclosporin had a dramatic impact on outcome.
Paediatric Lung Transplantation

Current issues.

- Cytomegalovirus
- Obliterative Bronchiolitis
- PTLD (post transplant lymphoproliferative disease)
- Cystic Fibrosis
- Airways
Cytomegalovirus

Promotes allograft rejection through different mechanisms.

Production of proinflammatory cytokines.

Increased expression of major histocompatibility complex and adhesion molecules, and molecular mimicry.
Obliterative Bronchiolitis

Predominant limiter of prolonged survival.
Defined as a staged decline in pulmonary function.
Histologic hallmarks are scar formation and fibrosis of small airways, often accompanied by intimal thickening and sclerosis of vessels.
PTLD (Post Transplant Lymphoproliferative Disease)

A family of lymphoid hyperplasias and neoplasias.

A strong association with Epstein Barr virus infection.
Cystic Fibrosis

Tracheal colonisation with organisms difficult to treat with antibiotics.
Airways

• Running absorbable suture is utilised for membranous bronchus anastamosis.
• Interrupted absorbable suture is utilised for cartilaginous bronchus anastamosis.
• End to end anastamosis of the bronchus without telescoping.
Immunosuppression

Tacrolimus based immunosuppression linked to diabetes mellitus.
Paediatric Lung Transplantation

Outcome

- Risks
- Survival
- Sequalae
Paediatric Heart Lung Transplantation

• Experience began in 1905.

• Clinical experience started in the late 60's.
Paediatric Heart Lung Transplantation

Indications

• End-stage restrictive or obstructive pulmonary disease.

• Primary or secondary end-stage pulmonary vascular disease.

• Significant LV dysfunction or cardiopulmonary defects.
Paediatric Heart Lung Transplantation

Current Issues.

- Immunosuppression
- Rejection diagnosis
- Graft Coronary artery disease
- Cytomegalovirus
- Obliterative Bronchiolitis
- PTLD
- Cystic Fibrosis
- Airways
Paediatric Heart Lung Transplantation

Outcomes.