AORTO-PULMONARY SHUNT SURVIVAL: A TEN YEAR AFRICAN SINGLE CENTRE REVIEW

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Introduction

- First successful shunt
- Published in JAMA 1945

SUMMARY OF THE ORIGINAL ARTICLE

The Surgical Treatment of Malformations of the Heart in Which There Is Pulmonary Stenosis or Pulmonary Atresia

Alfred Blalock, MD; Helen B. Taussig, MD

JAMA. 1945;128(3):189-202

Heretofore there has been no satisfactory treatment for pulmonary stenosis and pulmonary atresia. A “blue” baby with a malformed heart was considered beyond the reach of surgical aid. During the past three months we have operated on 3 children with severe degrees of pulmonary stenosis and each of the patients appears to be greatly benefited. In the second and third cases, in which there was deep persistent cyanosis, the cyanosis has greatly diminished or has disappeared and the general condition of the patients is proportionally improved.

The results are sufficiently encouraging to justify a larger series of cases. The operation has been designed to provide a means of supplying oxygen to the pulmonary capillary bed by altering the course of the blood vessels. It is a surgical palliative. Whether or not it is a real improvement is a matter for the future. The operation appears to be successful when there is some pulmonary blood flow and when the pressure in the left ventricle is not excessive. The results are better in patients with severe cyanosis and low cardiac output than in those with lesser degrees of cyanosis. The operation is not indicated when the pressure in the left ventricle is above 60 mm Hg. The postoperative management is essentially that of the patient with severe cyanosis, with the added problem of infection related to the surgical wound. The operation has not been performed in patients under one year of age. The results in these few cases have been excellent and were obtained by the principle of shunting, with the object of improving the circulation of the pulmonary capillaries.
Introduction

- Indications
  - Variety of conditions with decreased pulmonary blood flow

- Complications
  - Early
  - Late

- Risk factors
10 year experience

- Aorto-Pulmonary Shunt Survival: A Ten Year African Single Centre Review
- 1 July 2007 – 30 June 2017
- Charlotte Maxeke Johannesburg Academic Hospital
- 30 patients
  - 26 MBTS
  - 4 Central Shunts
Age at shunt

- < 1 week
- 1-4 weeks
- 1-12 months
- >12 months
Diagnosis

- DORV with PS: 17%
- TOF: 13%
- AV canal with TOF: 3%
- PA with VSD: 17%
- PA intact: 13%
- IVS: 13%
- Tricuspid atresia: 27%
- TGV: 7%
- Ebstein's: 3%
Outcome

- Died: 40%
- Lost: 34%
- Corrective surgery: 13%
- Awaiting corrective surgery: 13%
10 year experience
10 year experience
Conclusion

- Literature review
  - Effective palliation
  - Low mortality risk
- Our experience
  - Guarded outcome
  - Risk factors need to be explored
THANK YOU!
Firoza Motara
Bhavisha Nagar
Kathy Van Der Donck and her surgical team