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Palliative Surgery in Tetralogy of Fallot (TOF) With Small Pulmonary Arteries

Talal Fares*

Abstract

Objective & Background: Palliative procedures in TOF patients with small-caliber pulmonary arteries aim at alleviating cyanosis and improving the overall clinical condition, as well as progressively enlarging the small pulmonary arteries, a step preceding the total surgical correction of TOF. The present study compares between two types of palliative procedures, i.e. Modified Blalock's vs. Open Brock's.

Patients & Methods: The operative results of two groups of patients were compared in retrospect. Group I included (25) patients who benefited from a first-step Modified Blalock-Taussig Shunt and subsequently underwent total correction; Group II included (10) patients who also benefited from a first-step enlargement of the right ventricular outflow tract (Open Brock Technique) and later underwent total correction.

Group I patients' age ranged from 3 to 15 years, whereas that of Group II ranged from 7 to 22 years.

Results: three patients died of right ventricular failure following the procedure in group I, whereas no deaths were reported following the first-step technique in group II. Three hemorrhagic events took place in group I, compared with nil in group II following the first-step operative intervention employed. As for the other parameters (Arrhythmias and residual VSD etc...), there were no significant differences between both groups.

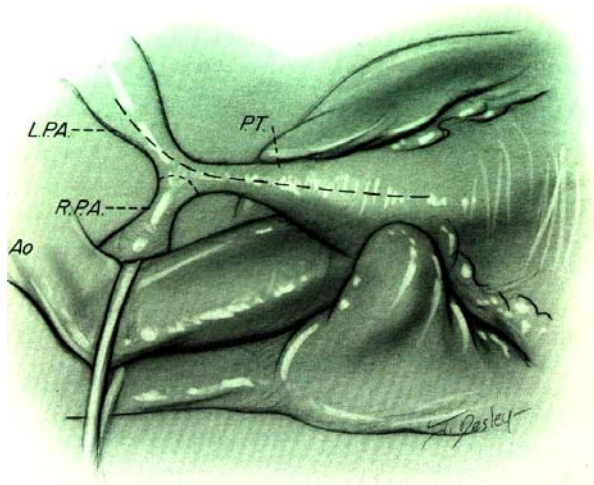
Overall, we noticed that the palliation results before the definitive total correction were better in group II, compared with group I.

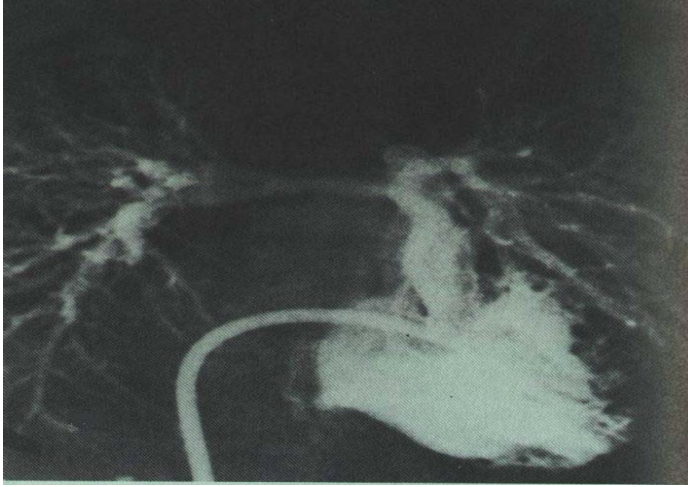
Conclusion: We believe that the enlargement of right ventricular outflow tract with the Open Brock Technique provides better blood flow to the lungs through both pulmonary arteries. Also, the pulsatile nature of pulmonary blood flow with this technique contributes to the progressive enlargement of both main pulmonary artery branches, better than when blood flows continuously in a non-pulsatile manner through a PTFE tube with the Modified Blalock-Taussig Shunt.

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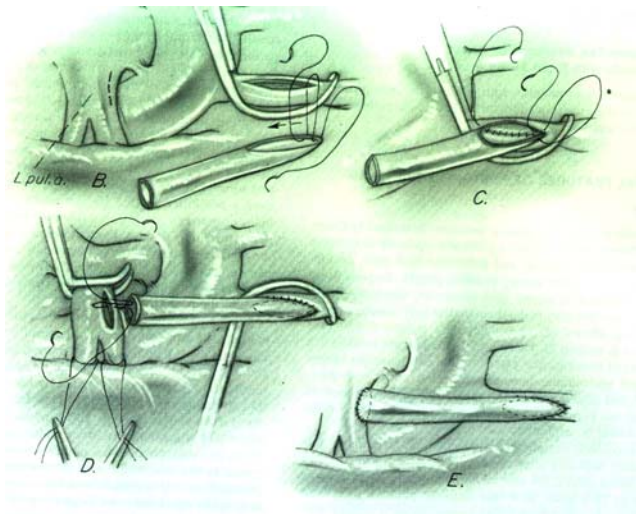


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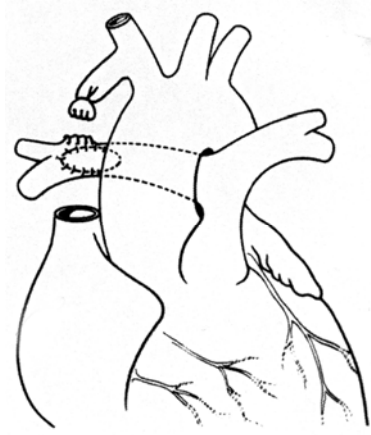
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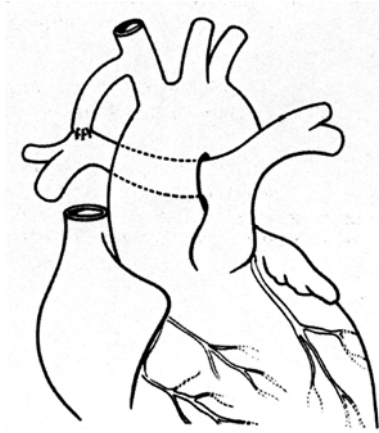


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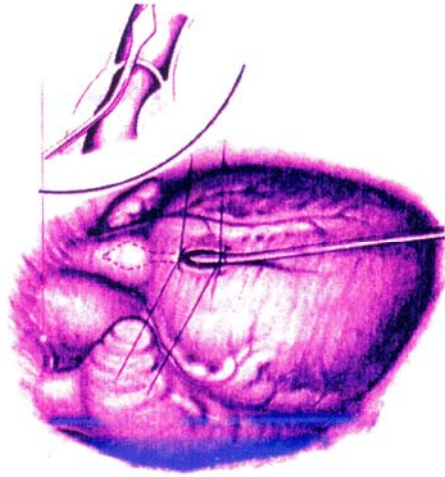
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