

Sildenafil Treatment in the Postoperative Stage I and II in Univentricular Circulation



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INTRODUCTION:

Sildenafil in the management of patients with univentricular circulation is less well defined and as yet has only been reported sporadically, especially in the postoperative Norwood Stage I and II.

AIM:

Present our experience with sildenafil treatment in patients with Univentricular circulation, started in the immediate postNorwood or Glenn Surgery.

METHODS:

DESIGN: Retrospective, descriptive study

Study Period: January 2008- December 2010

Study Population: All children with anatomical substrate of single ventricle with aortic hypoplasia, treated with sildenafil in the postoperative period of Norwood and Glenn procedure.

Treatment criteria:

- Hypoxemia $paO_2 < 30$ mmHg
- Nitric Oxid dependence
- Central venous pressure > 15 mmHg
- Transpulmonary gradient > 10 mmHg
- Restricted Pulmonary flow

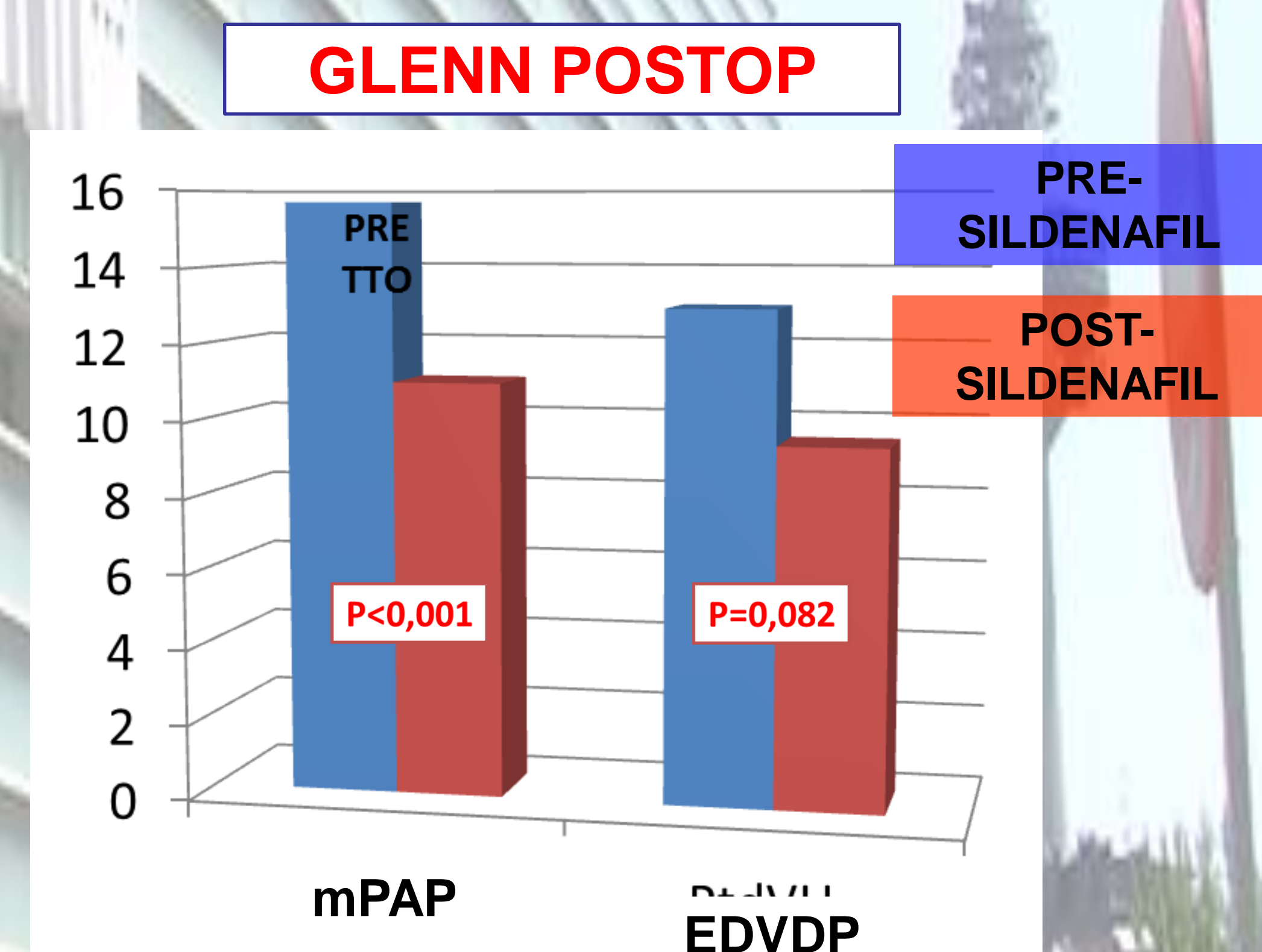
RESULTS:

TABLE 1. DESCRIPTIVE RESULTS (Initiating sildenafil)

N = 16	PostNorwood (N = 4)	PostGlenn (N = 12)
Age	Mean: 67,5 days	Mean: 181 days
Weight	Mean: 3.9 kg	Mean: 5.1 kg
Dosage	Mean Initial dosage: 2,25 mg/kg/day	Mean Initial dosage: 1,9 mg/kg/day
Duration	Median: 2 months	Median: 12.4 months
Mechanical ventilation	50 %	50 %
NOi	2/4	6/12
Ventricular disfunction	1/4	3/12
Restricted Pulmonary Flow	-Restrictive shunt: 2 -Pulmonary artery stenosis: 1	-Collateral circulation: 3 -Pulmonary stenosis: 4 -Cavo-pulmonary stenosis: 2

Outcome Measures:

- Clinical and Respiratory parameters: mechanical ventilation withdrawal, NOi withdrawal
- Echocardiographic Parameters: Ventricular Function
- Hemodynamic parameters: (Patients undergoing catheterization)



-Patients with worse ventricular function had a worse response ($P<0,046$)

-Limitation: Multiple confusion bias.

DISCUSSION:

Sildenafil has demonstrated decrease pulmonary vascular hipereactivity and Noi discontinuation after Glenn paliation. Reducing future development of venous collateral circulation in this patient group. More controversial is the treatment in postop Satage I paliation.