

SILDENAFIL: EXPERIENCE IN CHILDREN WITH OR WITHOUT PULMONARY HYPERTENSION AND CONGENITAL CARDIAC DEFECTS



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BACKGROUND:

Data regarding dosage, safety, and clinical and hemodynamic responses to Sildenafil for management of patients with congenital heart disease with or without pulmonary artery hypertension (PAH) has only been reported sporadically.

AIM:

Describe the cohort of children in whom sildenafil was used and determine the clinical and corresponding hemodynamic response.

METHODS:

DESIGN: Retrospective study

Study Period: January 2008- December 2010

Study Population: All children < 16 years

Clasification: 6 groups (Own Inclusion criteria)

Table 1.

Outcome Measures:

- Dosage, Duration, Side Effects
- Echocardiographic Parameters: Ventricular Function, Indirect PAH Signs
- Clinical Parameters: iNO withdrawal, oxygen saturation, clinical status
- Hemodynamic parameters: (Patients undergoing catheterization)

TABLE 1. CLASIFICATION GROUPS	RECORDS
GROUP I: PAH + BIVENTRICULAR PHYSIOLOGY + POST-TRICUSPID SHUNT	N=12
GROUP II: LEFT VENTRICULAR DISFUNCTION	N=10
GROUP III: POSTOP BIVENTRICULAR CONGENITAL CARDIOPATHIES	N=21
GROUP IV: POSTOP CARDIAC TRANSPLANTATION	N=5
GROUP V: CIANOSIS + REDUCE PULMONAR FLUX	N=5
GROUP VI: UNIVENTRICULAR PHYSIOLOGY	N=55

RESULTS:

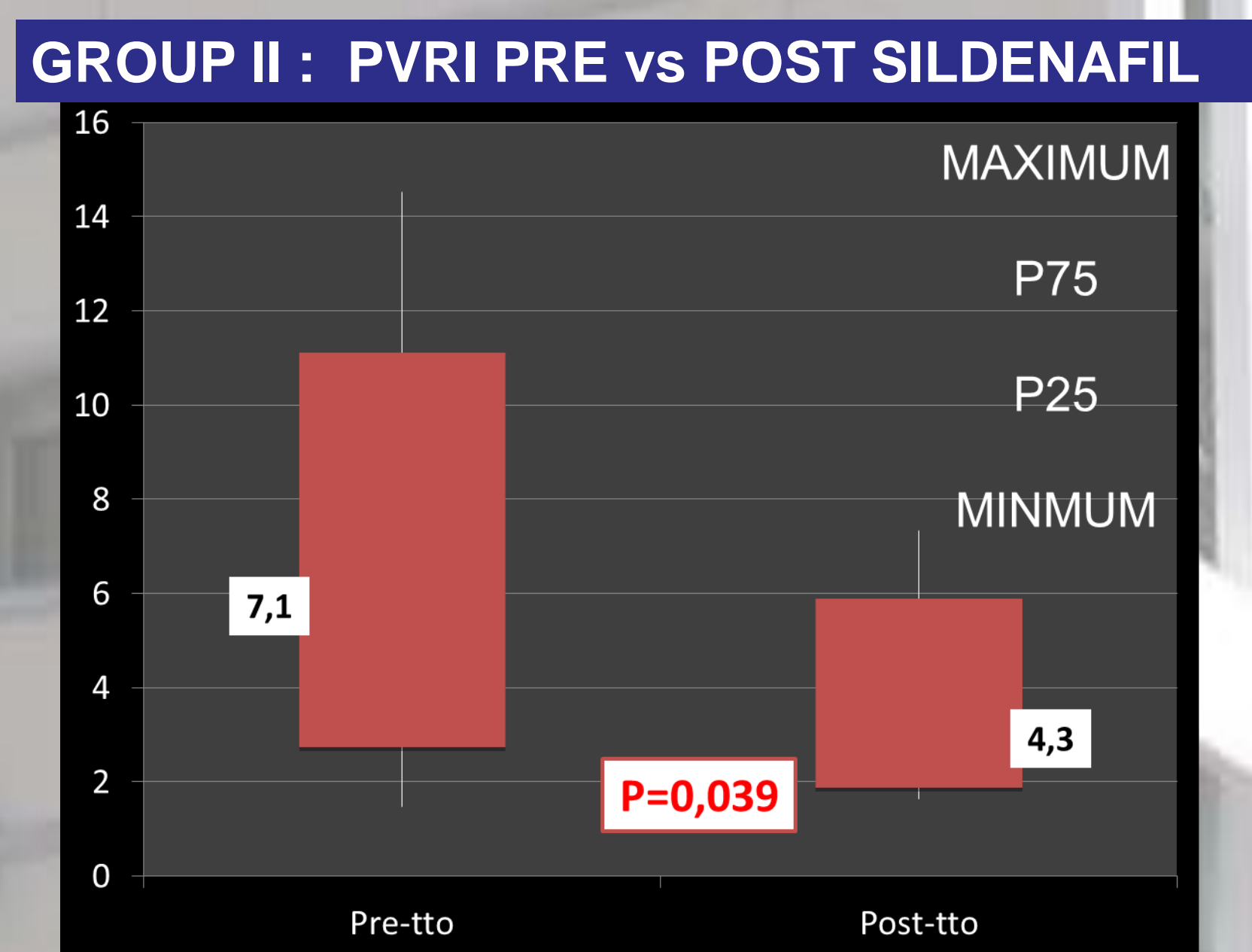
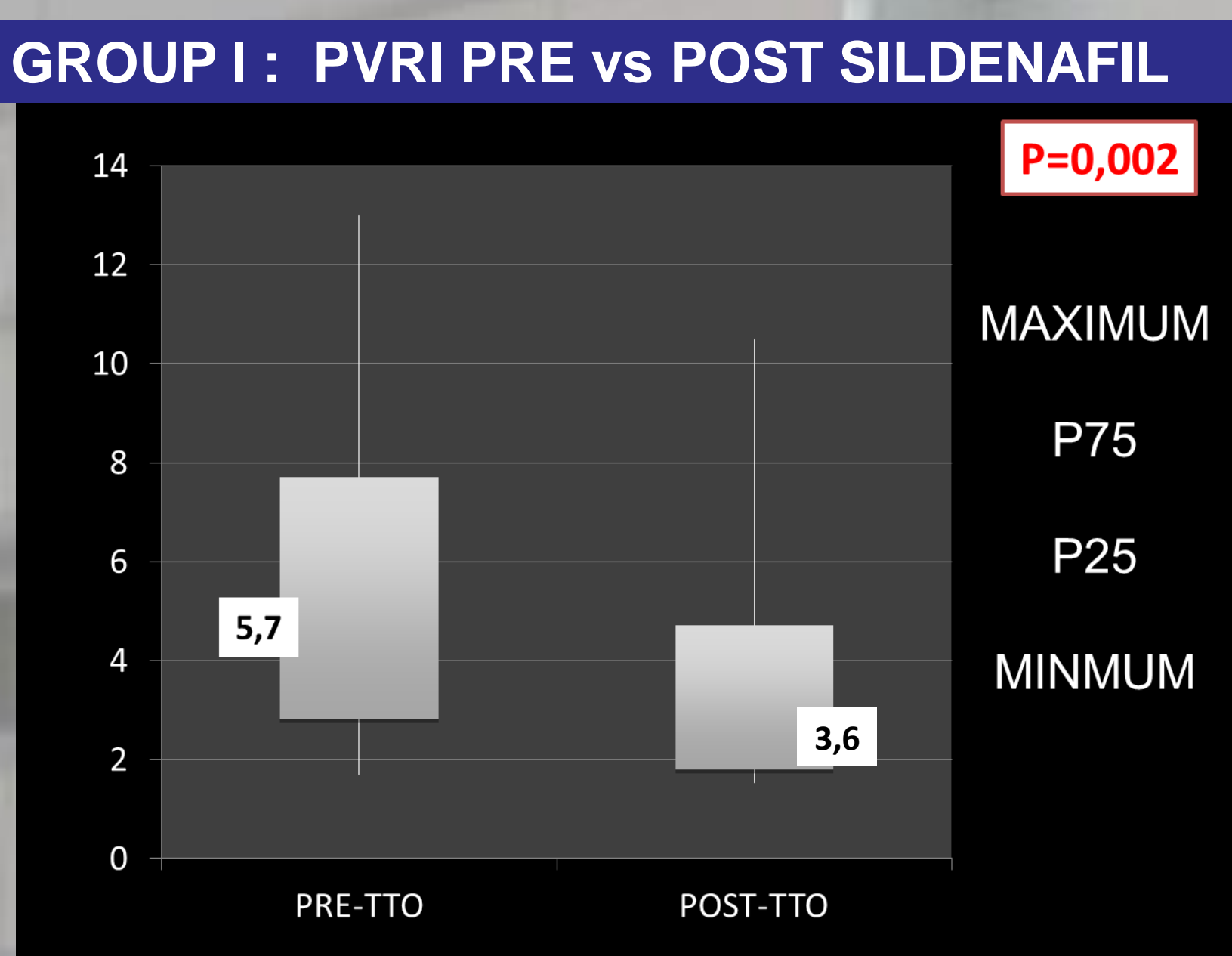
TABLE 2. DESCRIPTIVE RESULTS

Age < 6 months: 28,5%	Median: 39,5 months	Range: 10 days- 212 months
Gender	Male: 51%	Female: 49 %
Dosage Maximum dosage < 24 hrs: >50%	Mean initial dosage: 1,68 mg/kg/day	Range: 0,4-4 mg/kg/day
Duration Start postop: 2 ^o -7 ^o day	Median: 211 days	Maximum: 1308 days

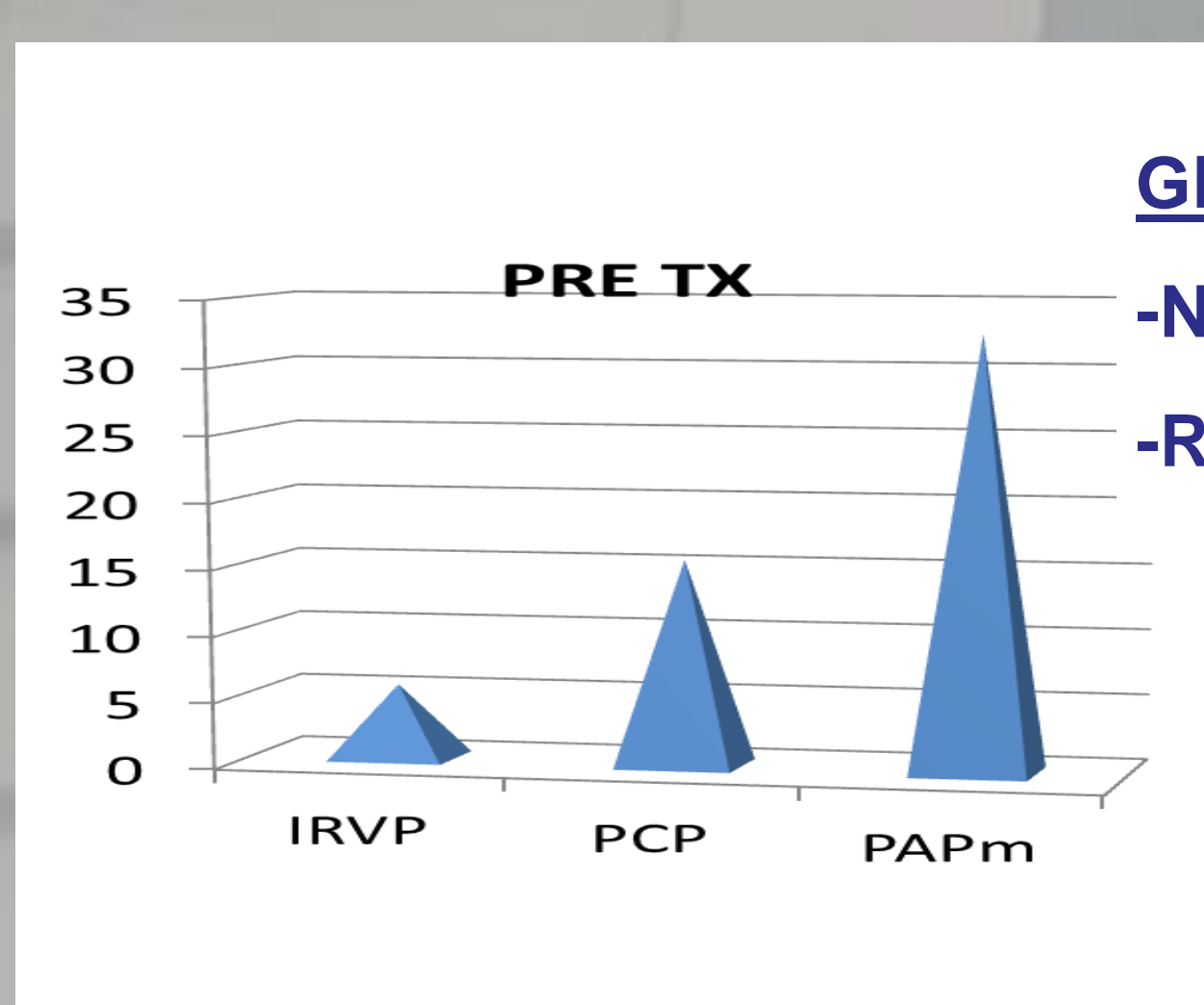
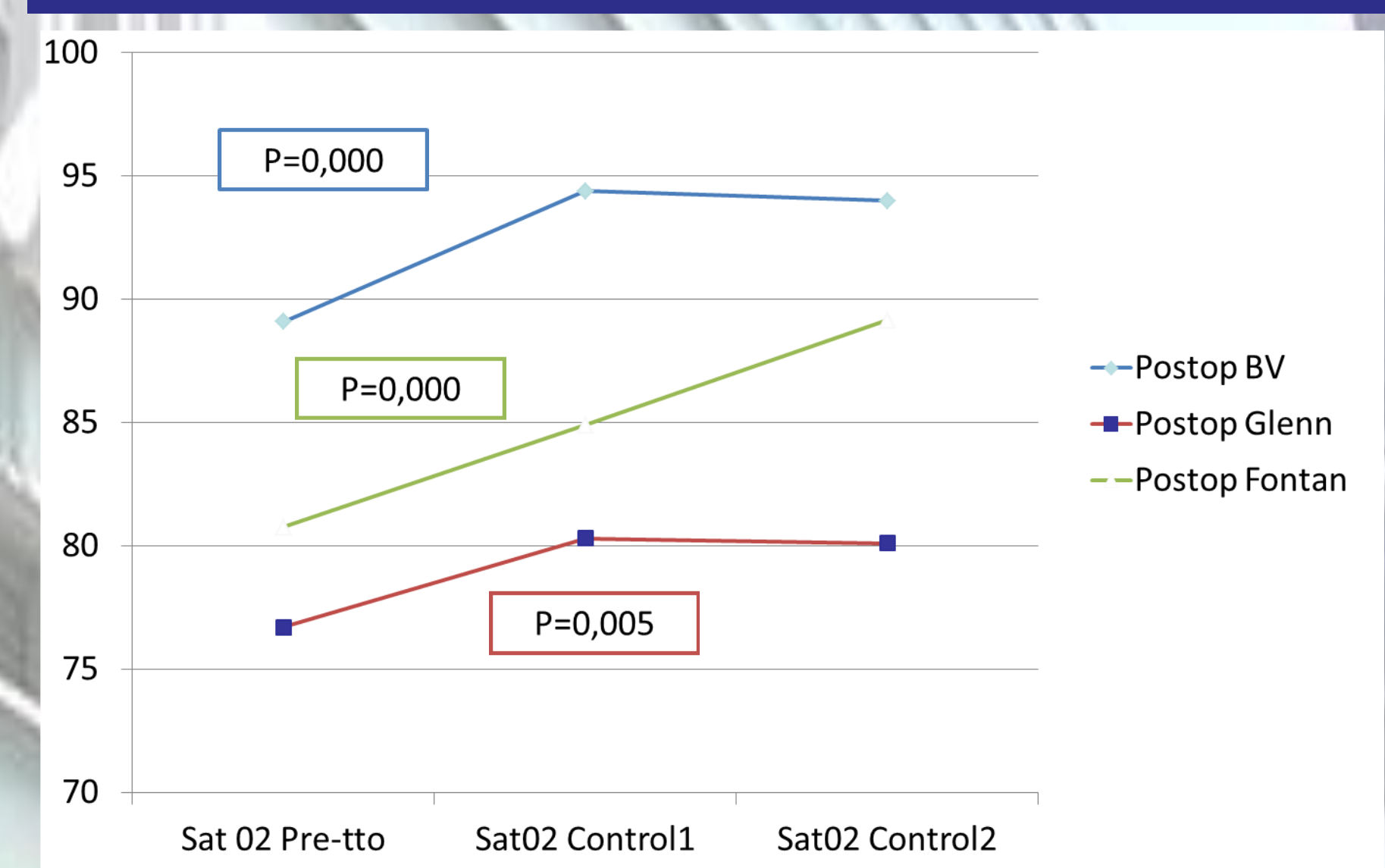
TABLE 3. SIDE EFFECTS N= 17

HYPOTENSION	13 patients (9 postop)
RUBOR	3 patients
HEADACHE/DIZZINESS	1 patient

* 2 patients finished their treatment due to side effects



GROUP III: OXIGENATION PRE/POST SILDENAFIL



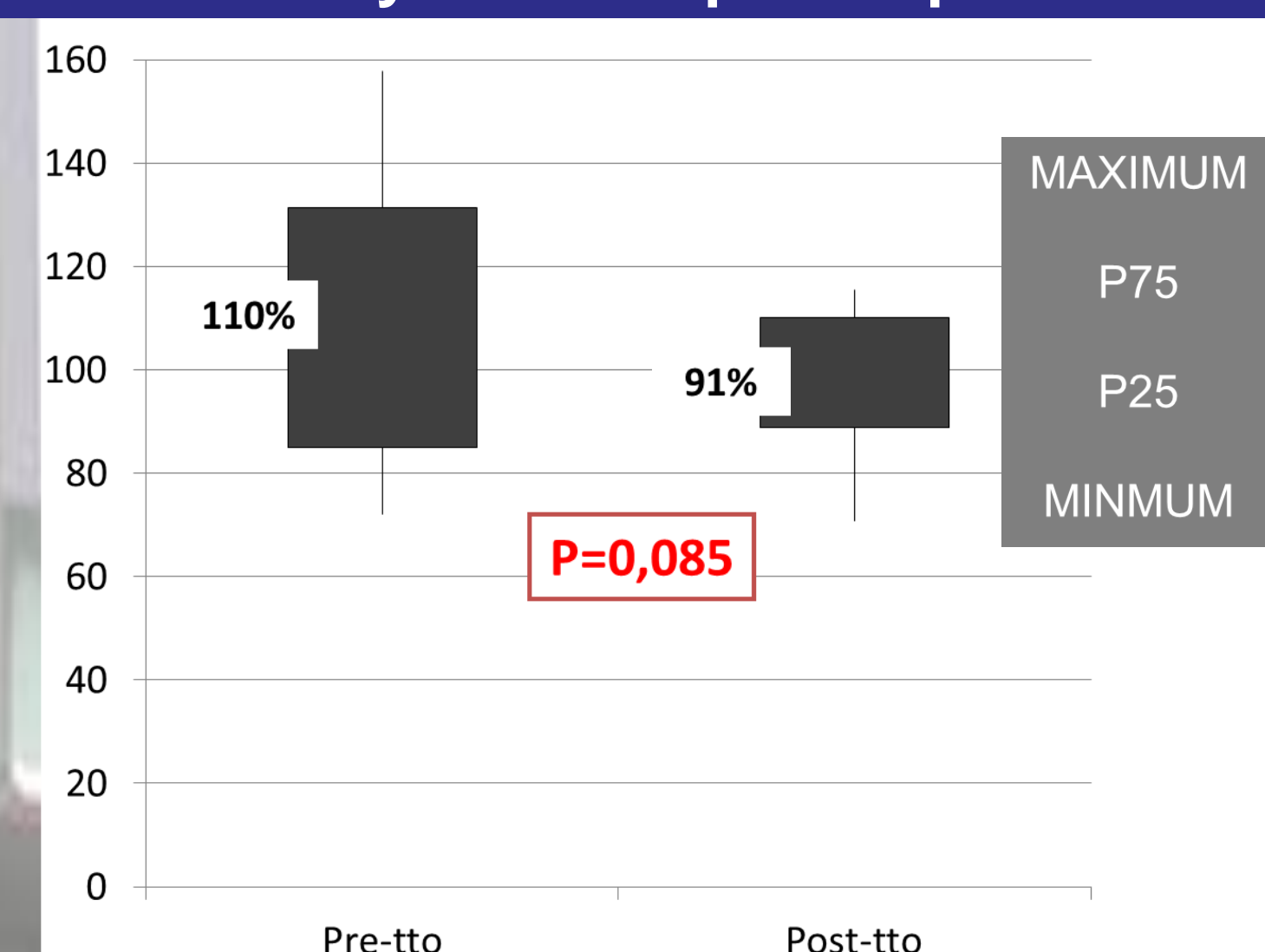
GROUP IV:

- NOi Withdrawal 100% postop.
- Right ventricular disfunction improve: 100%

GROUP V:

- Oxygenation improve at short term
- Clinical Relevance
- Anecdotal report

Ratio sPAP/ systolic AP pre VS post sildenafil



GROUP III:

- Pre-treatment:
 - 38 % Mechanical ventilation
 - 45 % NOi
 - Post-treatment:
 - 100 % NOi withdrawal
 - Worse Response those with ventricular disfunction P<0,05
- Multiple Bias

DISCUSSION:

- Sildenafil seems to be a good option for the management of the different pediatric cardiomiopathies with or without PAH. Significant advances in treatment options for this population were seen in the last few years. Although, global efficacy and security are mandatory to be confirmed.