

# Pregnancy in women with percutaneous pulmonary valve implantation

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# Background

- Percutaneous pulmonary valve implantation (PPVI)
  - Treatment of choice for dysfunctional right ventricular outflow tract.
  - Long-term follow-up:
    - Valve dysfunction (stent fractures): 30%
    - Endocarditis: 2.4-3.9 cases/100 person years

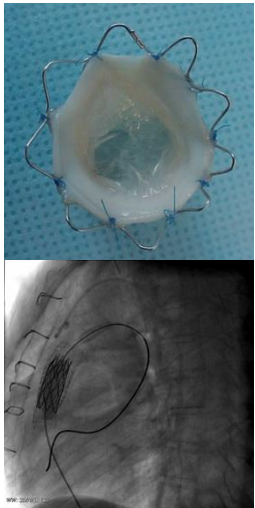
*Bonhoeffer P, Lancet, 2000*

*Cheatham JP, Circulation, 2015*

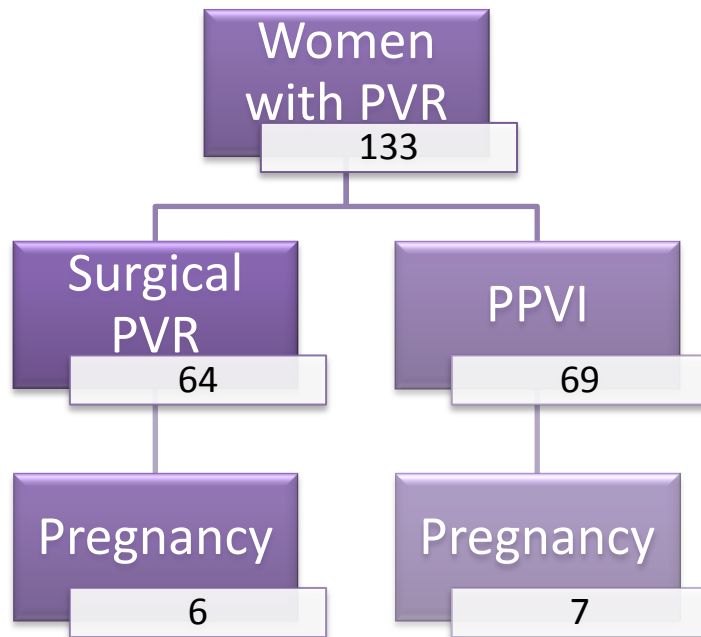
*Boudjemline Y, Eurointervention, 2014*

*Malekzadeh-Milani, J Thorac Cardiovasc Surg, 2014*

- There is little data on pregnancy following PPVI
- Aim: to analyze pregnancy outcome in these patients.



# Methods



Age at PVR	30 .0y.o.	27.1 y.o.
Age at 1 <sup>st</sup> pregnancy	30.2 y.o.	30.0 y.o
Delay from PVR	13 months	11.4 months

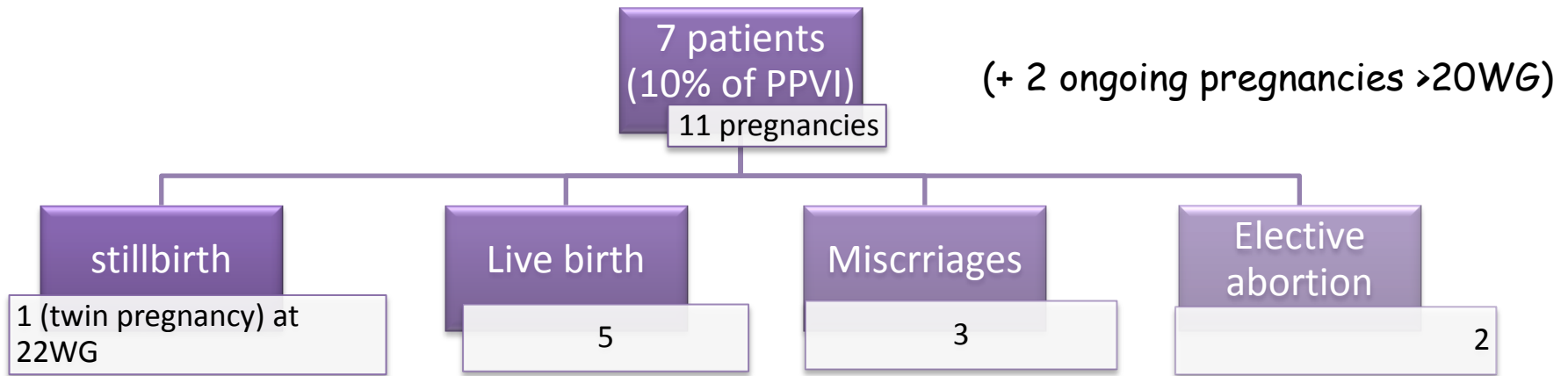
## Design:

- Female patient  $\geq 15$  years old
- Patient's consent was obtained to enquire about all pregnancies and to collect obstetric data.
- Cardiac data were prospectively collected (French prospective clinical trial)
- Last FU.

## Study population: n=7

- CHD : 2 pulmonary atresia+VSD, 1 ToF, 1DORV, 1 TGA, 1 truncus, 1 congenital aortic stenosis-Ross procedure
- PPVI was performed with Melody® valve, between 2009 and 2014 in our center
- 4 patients had history of cardiovascular event
- No pulmonary valve dysfunction

# Outcomes



## Management

- Treatment during pregnancy :
  - 10/11 Aspirin
  - 1/11 : LMWH,  $\beta$ -blockers, diuretics
- Delivery :
  - 3 CS for obstetrical reasons, 1 planned delivery
  - IE antibiotic prophylaxis in 10/11

# Outcomes

- Cardiac:
  - No maternal death
  - 1 atrial arrhythmia and HF
- Obstetrical :
  - 1 severe preeclampsia and 1 preterm labor
  - Mean term:  $33.9 \pm 7.5$  WG
- Neonatal
  - Prematurity : 1/5, 1 stillbirth (22WG)
  - Mean birth weight (at term)= $3027 \pm 170$ g
  - No congenital abnormality
- Last FU : median = 14 months,
  - 1 death 3 months after abortion, aspirin discontinuation: endocarditis with *Streptococcus sanguis*
  - no change in the trans-pulmonary valve maximal gradient (31 vs 27 mmHg) and no pulmonary regurgitation

# Conclusion

- This small first series of pregnancies with PPVI seems reassuring for the maternal and neonatal outcomes,
- However risk of infection, which needs careful monitoring by experienced teams
- Larger series are needed (registries)