Maternal and perinatal outcome in pregnancies with severe pulmonary hypertension

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Introduction

• Pulmonary Hypertension (PH) is associated with poor outcomes during pregnancy and puerperium. The hemodynamic changes of this period are not tolerated by these patients (maternal mortality rate may reach up to 50%).

• Pregnancy is not recommended in patients with severe PH and therapeutic abortion may be indicated.
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... however, in Brazil, for cultural and religious reasons, some patients do not accept the procedure.
Objective

• Study the pregnancy outcomes of patients with severe PH (pulmonary artery systolic pressure - PASP > 80mmHg) followed at a tertiary center from 2004 to 2014.

Method

• Retrospective observational study (charts and medical records analysis).
• The cases of post-capillary pulmonary hypertension were not included.
Results

- From 2004 to 2014 ten patients with severe PH were admitted at the Obstetrics Department of Hospital das Clinicas (five of them were nulliparous).

- The mean age of the patients was 25.7 ± 3.29 years.

- Two patients underwent therapeutic abortion
  - primary pulmonary hypertension-PASP 90 mmHg
  - Eisenmenger syndrome-PASP 131mmHg

- Eight patients decided to go through with pregnancy.
Results

Etiology of pulmonary hypertension

- 1 patient with chronic pulmonary thromboembolism
- 3 patients with primary pulmonary hypertension
- 4 patients with Eisenmenger syndrome
  - 1 patient with PDA
  - 2 patients with ASD
  - 2 patients with VSD

- PASP mean value of 108 ± 17 mmHg
Results

- All patients needed admission before delivery

- 5 (62%) patients received sildenafil

- All received thromboprophylaxis

- Gestational age at admission – 23 to 32 weeks (mean 28.5 weeks)
  - 6 of them due to maternal clinical deterioration
  - 2 due to fetal distress (signs of placental insufficiency)
Results

• All patients had preterm delivery (all c-sections)
  • Mean gestational age at delivery – 32.8 weeks (28-34 weeks)

• 7 live neonates (one fetus undelivered / maternal death)

• 43% neonates SGA (small for gestational age)

All deliveries due to maternal worsening and/or signs of fetal distress

![Birth Weight Chart](chart.png)
Results

• Maternal death – 4 in 8 cases (50%)
  • 2 patients died during pregnancy (27th and 28th weeks)
    • 1 perimortem c-section and one undelivered
  • 2 patients died in early puerperium

Conclusion

• Severe pulmonary hypertension is a condition that still leads to high maternal and perinatal risks. In the cases studied we observed clinical deterioration, high rates of preterm deliveries, c-sections and small for gestational age babies. Maternal mortality occurred in 50% of the cases.
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