

OUTCOME OF IN-UTERO TREATMENT OF FETAL LUNG LESIONS COMPARED TO PRIMARY HYDROTHORAX



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Introduction

Prenatal thoracic abnormalities such as Primary hydrothorax and fetal lung lesions (CPAM and BPS) are rare developmental lesions that might lead to **hydrops fetalis**.

In order to reverse hydrops, placement of **pleuro-amniotic shunt (PAS)** is often warranted.

We describe the outcome of fetuses treated by PAS due to fetal lung lesions and compare the outcome to fetuses treated due to primary hydrothorax.

Methods

A survey of all invasive procedures for fetal thoracic abnormalities performed by the fetal medicine unit between the years 2004-2015.

Results

45 fetuses had undergone invasive procedures for thoracic abnormalities of which :

37 fetuses were treated by PAS (64 shunt insertions)

- 24 due to primary hydrothorax
- 13 due to fetal thoracic SOL (7 CPAM, 6 BPS)

Pre-natal and short term neonatal outcome are detailed in tables below:

	Primary Hydrothorax	Thoracic lesions	p
Hydrops	20/24 (83%)	11/13 (84%)	0.92
GA@PAS insertion (median; rage)	29;17-34	26;17-31	0.06
PAS Re-Insertion	8/24 (33%)	5/13 (38%)	1.00
Hydrops Resolution	12/19 (63%)	10/11 (91%)	0.19
GA@delivery	37;29-39	36.5;33-38	0.73
PAS to delivery, weeks	5;0-22	8;3-21	0.15

Short term neonatal outcome

Perinatal survival	18/20 (90%)*	11/13 (84%)	0.64
Single shunt	14/15 (93%)	7/8 (87.5%)	1.00
Multiple shunts	4/5 (80%)	4/5 (80%)	1.00
APGAR@5min	9;2-10	9;4-10	0.45
Ventilation required	9/18 (50%)	8/11 (73%)	0.27
Ventilation time, days	0.5;0-20	5;0-25	0.26
O₂ support time, days	2;0-42	12;0-55	0.18
Hospitalization time, days	20;3-94	27;3-84	0.87
Abnormal head US	0/18 (0%)	1/11 (9%)	0.37
Other anatomical malformation	3/18 (16%)	1/11 (9%)	0.87

*4 cases lost to follow up.3 missing data 1 termination of pregnancy

Conclusion

PAS insertion in hydropic cases with lung lesions is effective and resulting in high perinatal survival even in cases when sequential insertion is needed. Short term outcome of neonates with fetal lung lesions treated by PAS is comparable to neonates treated due to primary hydrothorax.