

Background

- Recent advances in respiratory care improved the prognosis of newborns with severe respiratory failure.
- However, air-leak continues to be frequent.
- Pneumothorax (PT) - most common subtype of air-leak in the neonatal period.
- Incidence of symptomatic neonatal PT ~0.8–1.9/1000 live births.

Primary aim: characterize our neonatal population diagnosed with PT.

Secondary aim: compare preterm and full-term patients.

Methods

- Observational retrospective study.
- Inclusion criteria:** primary PT diagnosed in our NICU from 01/2012 – 11/2022.
- Statistical comparison was performed using SPSS.

Results

- N total = 73 patients.

Fig. 1 – Distribution by year of diagnosis

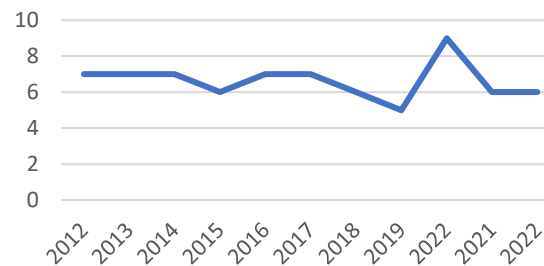


Fig. 2 – Distribution by sex

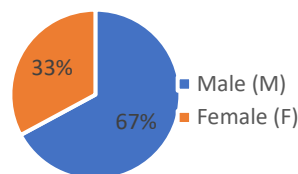


Fig. 3 – Gestational age

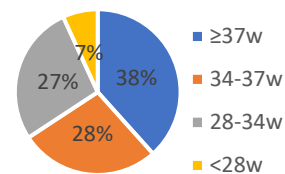


Fig. 4 – Type of birth

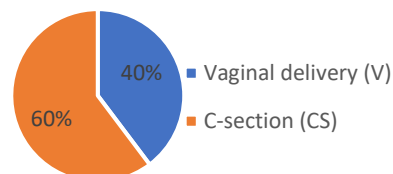


Fig. 5 – Side of PT

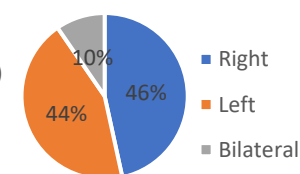


Table 1 –Comparison of predictors between preterm and full-term patients

Purposed predictors	Preterm Median (IQR)	Full-term Median (IQR)	P-value
Age of diagnosis (h)	32 (21.5-48)	24 (10-48)	0.093

Purposed predictors	Preterm N (%)	Full-term N (%)	P-value
Sex (F/M)	17/28 (62.2)	7 (25)/21 (75)	0.312
Type birth (V/CS)	20/25 (55.5)	9/19 (67.8)	0.082
Early (1 st 2h) Respiratory distress	44 (97.8)	24 (85.7)	0.047
Early Invasive mechanical ventilation	8 (17.8)	3 (10.7)	0.412
Exogenous surfactant	8 (17.8)	0 (-)	0.017
Pneumomediastinum	7 (15.5)	5 (17.8)	0.796
Exsufflation	23 (51.1)	9 (32.1)	0.112
Chest drain	20 (44.4)	4 (14.3)	0.08
Transient tachypnoea	13 (28.9)	20 (71.4)	0.001
Hyaline membrane disease	25 (55.5)	1	<0.001

Discussion

- ✓ Although respiratory distress occurred earlier in full-term newborns, PT appears to be more frequent in the first two days of life regardless of gestational age.
- ✓ 1 in 3 patients required a chest drain, with a significant higher risk in premature patients.
- ✓ Mortality rate from pneumothorax was low (4%) even in premature patients.