MP44-17

The outcome of testicular sperm extraction in patients with non-obstructive azoospermia with a history of undescended testis

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*I have no potential conflict of interest to report

Objectives:To determine the sperm retrieval rates(SRRs) and predictive factors of patients with a history of undescended testis after testicular sperm extraction (TESE).

Methods: A total of 311 patients were diagnosed with non-obstructive azoospermia (NOA) and underwent TESE were included in this study. These patients were divided into two groups:

1-Undescended group:62 pts with history of undescended testes

N:26 pts with a history of bilateral orchidopexy,

N:15 pts with a history of unilateral orchidopexy,

N:21 no history of surgery.

2-Idiopathic group: 249 patients.

Table 1: Baseline data of all patients

No.patients	311
Age (year) *	34.0±5.8
Partner age (year) *	30.1±5.0
History of undescended testes(n)	
Unilateral	28 (9.0%)
Bilateral	34 (10.9%)
History of orchidopexy (n)	
Unilateraly	15 (4.8%)
Bilateraly	26 (8.4%)
Age of orchidopexy (year) *	15.4±10.2
Mean testicular volume/ml *	12.3±4.8
FSH IU l^{-1}*	22.2±14.4
Testosteron ng dl^{-1}*	4.2±6.9
Sperm (+)	165 (53.1%)

Sperm (+):Sperm obtained via TESE,
FSH: follicle-stimulating hormone , *:Mean±SD,

Results:

Table-2. Sperm retrieval vs Testicular histology in all patients with NOA

	Testes, n (%) (N = 311)	Sperm(-)	Sperm(+)	p
Sertoli Cell Only	188 (60.5%)	116 (79.5%)	72 (43.6%)	0.001*
Late maturation arrest	45 (14.5%)	23 (15.8%)	22 (13.3%)	0.545
Early maturation arrest	29 (9.3%)	5 (3.4%)	24 (14.5%)	0.001*
Hypospermatogenesis	32 (10.3%)	2 (1.4%)	30 (18.2%)	0.001*
Normal spermatogenesis	17 (5.5%)	0	17 (10.3%)	0.001*

Table 3. Sperm retrieval vs Testicular histology in patients with undescended testes

	Testes, n (%) (N = 62)	Sperm (-)	Sperm (+)	p
Sertoli Cell Only	38 (61.3%)	25 (80.6%)	13 (41.9%)	0.002*
Late maturation arrest	6 (9.7%)	4 (12.9%)	2 (6.5%)	0.390
Early maturation arrest	7 (11.3%)	2 (6.5%)	5 (16.1%)	0.229
Hypospermatogenesis	7 (11.3%)	0	7 (22.6%)	0.005*
N. Spermatogenesis	4 (6.5%)	0	4 (12.9%)	0.076

*P<0.05 is defined as statistical significance.

SRRs;

- Idiopathic group:134 (53.8%)
- Undescended groups 31 (50%)

SRRs;

- Sertoli Cell Only: 34.2%,
- Early maturation arrest :33.3%
- Late maturation arrest 71.4%
- Hypospermatogenesis 100%
- Normal spermatogenesis: 100% (p<0.001).

In the undescended group,

❖ the SRRs of pts with orchidopexy were not different than pts without of orchidopexy

❖ Pts with unilateral orchidopexy had a higher SRR than bilateral orchidopexy (p=0.031).

Conclusions:

The testicular histopathology and unilateral undescended testis were identified as independent predictors of SRRs for men with a history of undescended testis.