TITLE

A COMPARATIVE STUDY BETWEEN TWO TECHNIQUES OF LAPAROSCOPIC ORCHIOPEXY FOR INTRA-ABDOMINAL TESTIS (VIRTUAL)

Muhammad Azhar. Shazia Jalil; Fazal Nouman Wahid; Ghaida Alabidi; Omar Bajaber; Parameaswari Jaganathan; Saad Al Hamidi; Khalid Alfifi; Tarek Harb; Abdelbasit E.Ali; Mishraz Sheikh. King Saud Medical City, Riyadh, Saudi Arabia

OBJECTIVE

The study aims to compare outcomes between the two techniques Fowler Stephens Laparoscopicorchiopexy (FSLO) and laparoscopic traction (Shehata) orchiopexy and compare the impact of age at orchiopexy on the post-operative risk of testicular atrophy, and mal-positioning.

METHODS & MATERIALS

We conducted a retrospective analysis of the clinical data of patients who underwent the two-stage Shehata technique and FSLO for intra-abdominal testis from August 2016 to September 2019. Baseline characteristics as well as post operative outcomes were recorded for analysis.

Twenty patients were treated by two-stage laparoscopic orchiopexy including one case of bilateral intraabdominal testes in each group. Eleven patients were treated by laparoscopic traction orchidopexy and nine were by FSLO. Our primary outcome testicular atrophy was observed in 30% (3/10) who underwent FSLO whereas no testicular atrophy was seen in patients who underwent the Shehata group (p=0.011). In the Shehata group, 75% (9/12) of the testis were found in the normal scrotal position whereas 60% (6/10) achieved scrotal position in the FSLO group (p=0.001). 75% of the testis were found to have an appropriate size in the Shehata group, whereas only 30% of the testis had normal size in the FSLO group (p=0.001). In the FSLO group, the scrotal position was more successfully achieved in the older age group (p=0.006

RESULTS

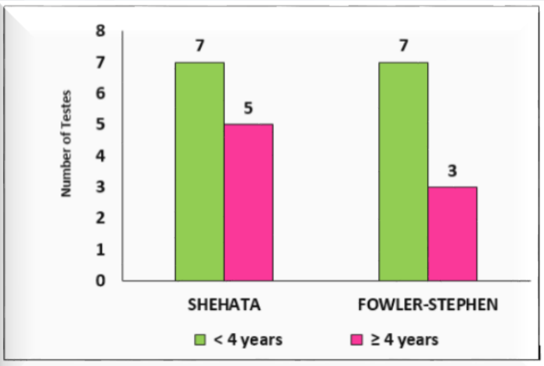

Fig. 1. Surgical procedures on 22 testes at stage two in 20 children

Outcome	No atrophy		Position (scrotum)		Size (normal)	
	Shehata Group	FSLO Group	Shehata Group	FSLO Group	Shehata Group	FSLO Group
Observed	12	7	9	6	9	3
Total	12	10	12	10	12	10
Proportion	100%	70%	75%	60%	75%	30%
Independent sample proportion test (Wald) (*p*-value)	0.038*		0.451		0.019*	

Table 2. Comparison of outcomes among 22 testes between the Shehata and FSLO procedures

Table 3. Outcomes observed between age groups (<4 and ≥4 years)

Outcome	No atrophy		Independent sample proportion test (Wald)	Position (scrotum)		Independent sample proportion test (Wald)	Size (normal)		Independent sample proportion test (Wald)
	Shehata Group	FSLO Group	*p*-value	Shehata Group	FSLO Group	*p*-value	Shehata Group	FSLO Group	*p*-value
Age (years): <4 (*n*)	7	7		7	7		7	7	
Observed for <4 (*n*, %)	7 (100%)	4 (57.1%)	0.011*	7 (100%)	3 (42.9%)	0.001*	7 (100%)	1 (14.3%)	0.001*
Age (years): ≥4 (*n*)	5	3		5	3		5	3	
Observed for ≥4 (*n*, %)	5 (100%)	3 (100%)	1.000	2 (40%)	3 (100%)	0.006*	2 (40%)	2 (66.7%)	0.445

*Statistically significant at a 5% level.

CONCLUSION

We conclude that the laparoscopic traction technique is superior to FSLO in preserving vascularity and achieving the scrotal position of the testis in children under four years of age. Whereas FSLO has better results in older age groups.