

One Versus two layer urethroplasty in preventing ureterocutaneous fistula after hypospadias repair

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Introduction

When dealing with modern hypospadias surgery the aims are to achieve good functional and cosmetic outcome and also to minimize complications such as urethrocutaneous fistula. The use of variable flaps, mainly vascularized tissue such as spongiosum and dartos had been proven only to reduce the frustrating complication of fistula formation.

Purpose

To compare the outcome and complication rate of a single layer urethroplasty over that of using the tissue adjacent to the urethroplasty as an additional layer

Materials and methods

A total of 86 children undergoing primary hypospadias surgery between 2009-2013 were retrospectively evaluated. Group A (51 patients), in which a straight forward one layer urethroplasty and a single dartos flap was carried out (Fig. 1); and group B (35 patients), in which a second layer from local tissue lateral to the urethroplasty line was performed (Fig 2) prior to assembling the dartos flap (Fig 3). A modification of the Y to I wrap (sponge wrap, Fig 4).

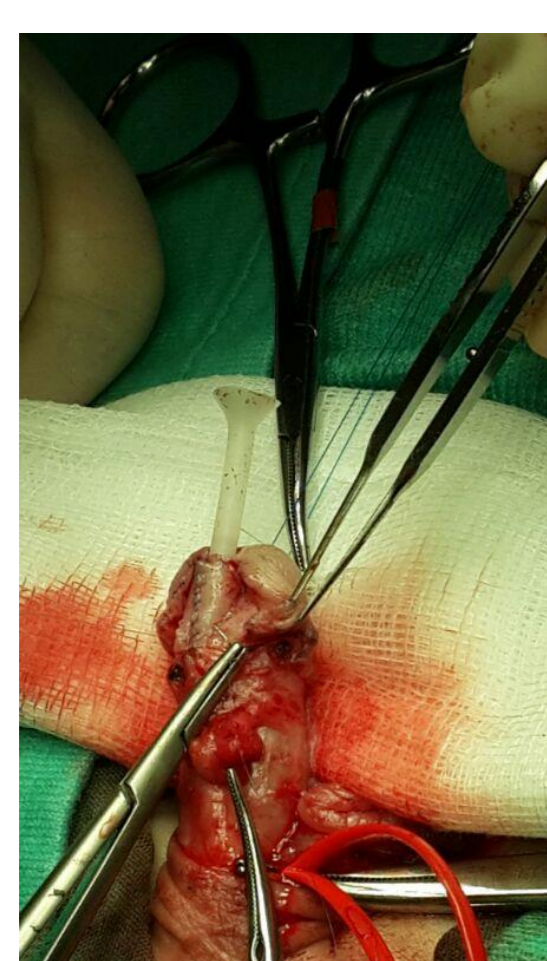


Fig 1. One layer urethroplasty

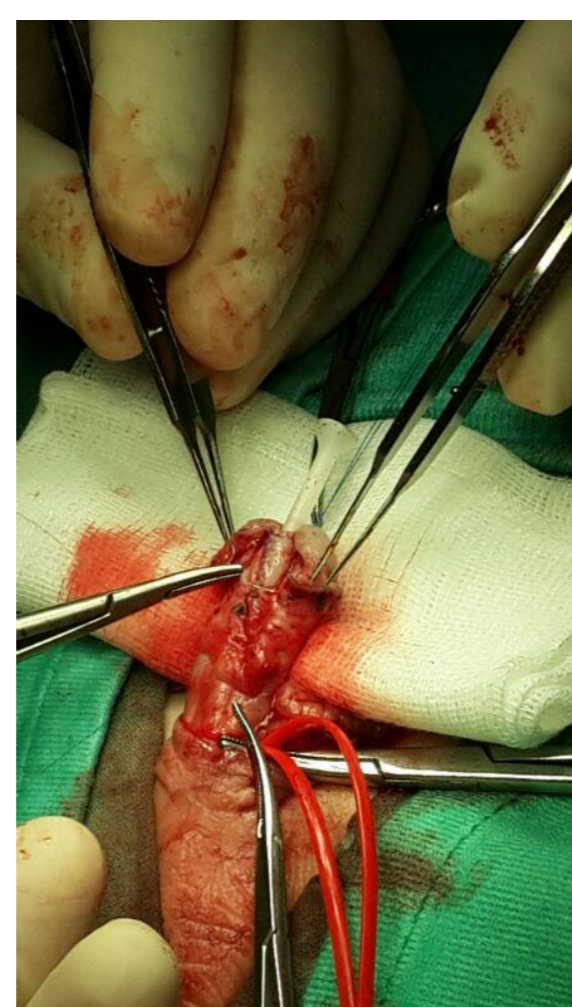


Fig 2. Second layer

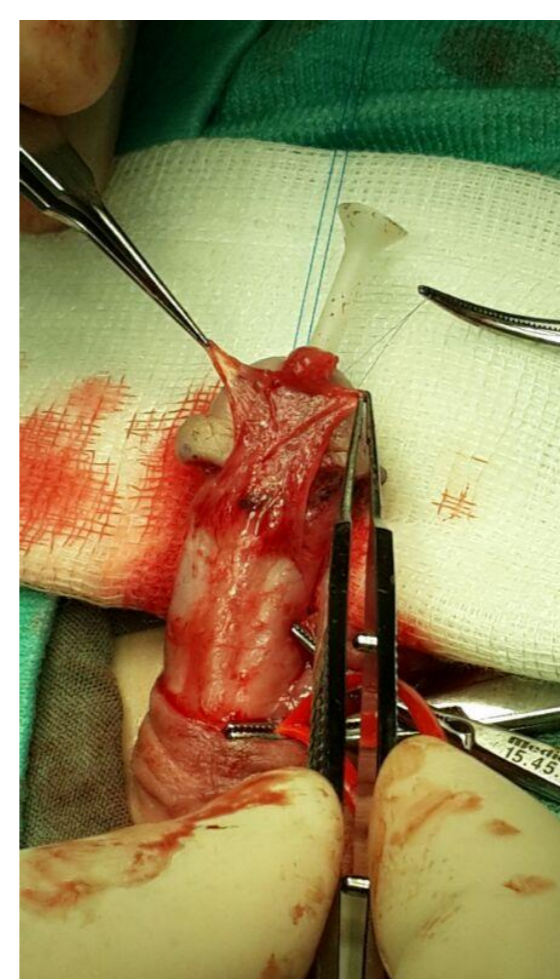


Fig 3. Dartos layer

Results

There was no significant difference between the two groups in terms of age during operation, meatal location and surgical technique.

Mean follow up was 11 month in both groups. Urethrocutaneous fistula developed in 6/51 patients (11.7%) in group A and 2/35 (5.7%) in group B.

	Group A	Group B	P-Value
Average age at op. (month)	27	30	NS
Meatal location	Distal	22	NS
	Midshaft	12	NS
	Proximal shaft	0	NS
Type of op.	Tierch Dupley	13	NS
	TIP	16	NS
	Other	6	NS
Median follow up (month)	11	11	NS
Urethrocutaneous fistula rate	6/51 (12%)	2/35 (5%)	0.46

Conclusion

Second layer urethroplasty using the available tissue lateral to the urethroplasty line is a simple procedure, in this study, this technique although not statistically significant showed reduction in fistula formation.

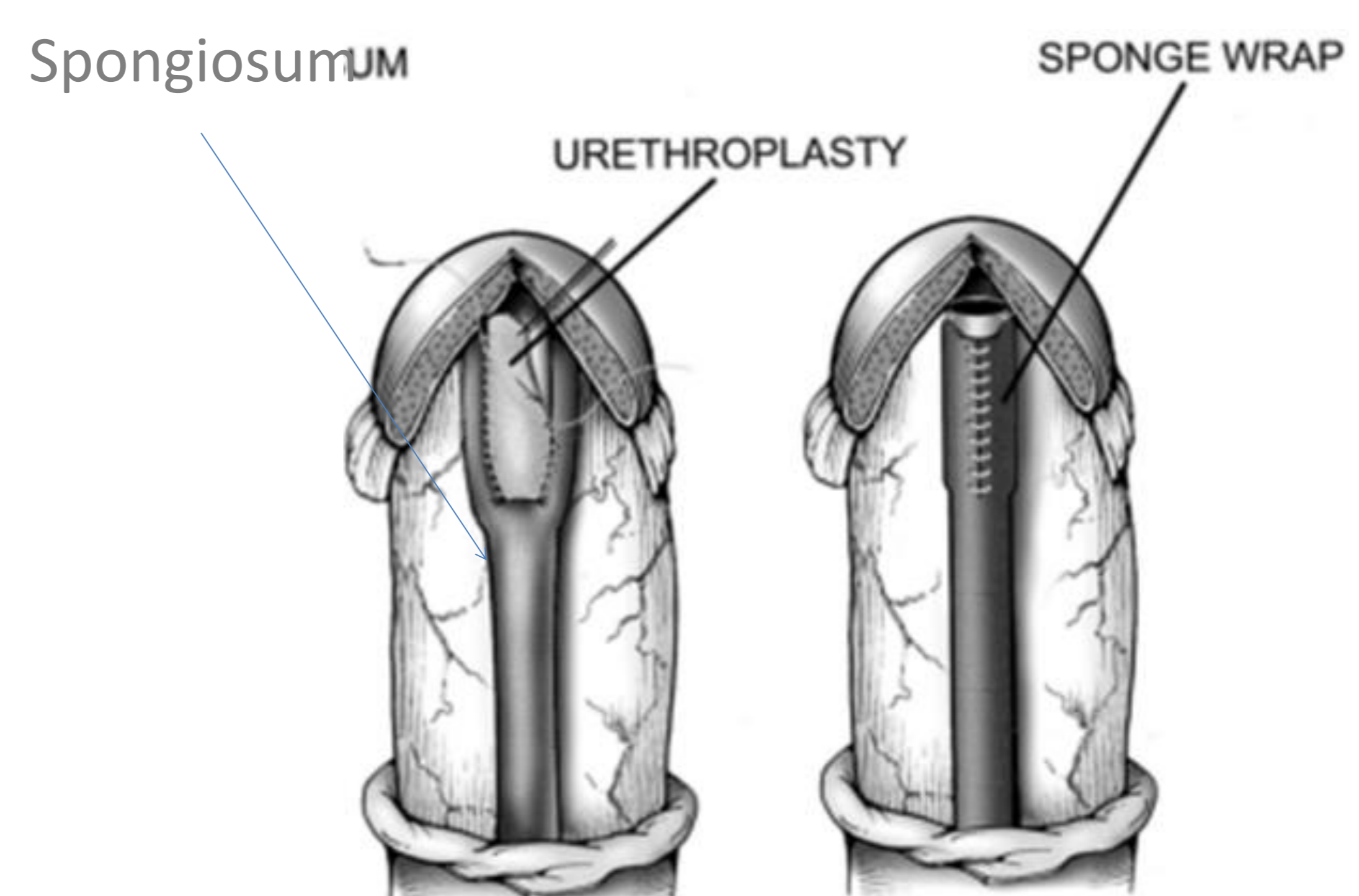


Fig 4. Y-to-I spongiosum wrap