

Supplement

Table S1. Summary of univariate and multivariate regression analyses examining the linear association between temporary abdominal closure (TAC) method and outcomes.

	Estimate	Standard. Error	t value	p-value
Univariate model-Association between type of TAC and LOS				
(Intercept) ABTHERA™	26.13	2.12	12.35	< 0.001
Whipstitch	-7.22	3.34	-2.16	0.032
Multivariate model-Association between type of TAC and LOS				
(Intercept) ABTHERA™	-0.81	3.34	-0.24	0.807
Whipstitch	-4.00	2.31	-1.73	0.086
ISS	0.36	0.09	3.96	< 0.001
Duration of TAC placement	0.03	0.01	3.84	< 0.001
Number of Laparotomies	3.37	0.55	6.12	< 0.001
Univariate model-Association between type of TAC and ICU LOS				
(Intercept) ABTHERA™	17.58	1.73	10.18	< 0.001
Whipstitch	-5.49	2.73	-2.01	0.047
Multivariate model-Association between type of TAC and ICU LOS				
(Intercept) ABTHERA™	-5.85	2.74	-2.14	0.035
Whipstitch	-3.09	1.89	-1.63	0.105
ISS	0.29	0.08	3.80	< 0.001
Duration of TAC placement	0.02	0.01	3.32	0.001
Number of Laparotomies	3.28	0.45	7.26	< 0.001

LOS-Length of stay

Table S2. Patient Demographic Characteristics.

Characteristic	ABTHERA™ n = 57 (Mean ± SD)	Whipstitch Closure n = 29 (Mean ± SD)	Both Procedures n= 26 (Mean ± SD)	p-value
Age	38.5 ± 17.7	38.3 ± 19.9	45.0 ± 17.8	0.278
Sex (male) n (%)	46 (82.1)	24 (82.8)	21 (80.8)	0.987
BMI	30.4 ± 7.6	29.5 ± 6.7	30.6 ± 5.3	0.791
ISS	26.6 ± 11.8	24.2 ± 9.8	29.24 ± 13.7	0.293
ASA	3.8 ± 1.0	3.7 ± 1.0	3.9 ± 1.0	0.893
Duration of TAC placement (hours) ‡	84.9 (251.5) ^a	25.8 (20.6) ^b	105.7 (357.1) ^a	0.026
Number of Laparotomies‡	3.0 (3.0) ^a	2.0 (0.0) ^b	4.5 (4.0) ^c	<0.001

Values with different superscripts in a row are significantly different using post-hoc comparisons with Holm-Bonferroni correction; ‡ Comparisons done using Kruskal Wallis test, summarized as median ± Interquartile range (IQR)

Table S3. Patient Outcomes.

Outcome	ABTHERA™ n = 57	Whipstitch Closure n = 29	Both Procedures n = 26	p-value
Length of stay‡	19 (20.3) ^a	9 (10) ^b	22.5 (18.5) ^a	<0.001
ICU LOS‡	12 (16.0) ^a	5 (5.0) ^b	17 (17.0) ^a	<0.001
Ventilator days‡	6 (14) ^{ab}	3 (4.5) ^a	10 (11.3) ^b	<0.001
Duration for definitive closure (days) ‡	8 (16.0)	1.0 (1.0)	17 (24.0)	<0.001
Mortality	13 (23.2)	10 (34.4)	5 (19.2)	0.380
Complications n (%)				
Bleeding	16 (28.5)	8 (27.6)	10 (38.5)	0.610
Evisceration	4 (7.1)	0 (0)	3 (1.1)	0.229
Wound dehiscence	5 (8.9)	0 (0)	5 (19.2)	0.040
Reoperations	5 (9.1)	1 (3.4)	2 (7.7)	0.801

LOS: Length of stay; Values with different superscripts in a row are significantly different using post-hoc comparisons with Holm-Bonferroni correction; ‡ Comparisons done using Kruskal Wallis test, summarized as median ± Interquartile range (IQR)