Dissection Technique for Abdominoplasty: A Prospective Study

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Abstract

Introduction: Due to its popularity and high complication rate, abdominoplasty techniques have undergone a continuous process of evolution to provide better and safer results.[1-2] The technique used to raise the abdominal flap has been implicated, but there are few studies, none is prospective and the results are contradictory.[3-4] The aim of this study was to evaluate its effect on outcomes and complications after a full abdominoplasty, comparing two different techniques, the scalpel and the diathermocoagulation device (coagulation mode).

Methods: Prospective study that included women submitted to abdominoplasty with umbilical transposition, between January 2009 and December 2011, at a single centre. Two groups identified: group A, abdominoplasty performed with steel scalpel; and group B, abdominoplasty performed with diathermocoagulation.
Several variables were determined including general characteristics, time until drain removal, daily and total volume of drain output, operative time, local and systemic complications; statistical analysis using SPSS v21.0; uni and multivariate analysis performed.

Results: A total of 119 full abdominoplasties were performed (group A, 39 patients; group B, 80 patients). There were no statistically significant differences between groups with respect to general characteristics, except for BMI, comorbidities and weight of surgical specimen; no differences for operative time, systemic complications, hematoma and necrosis incidence. The scalpel group had a significant reduction of 54,56 percent on total drain output, 2,65 days on time to drain removal; no cases of seroma or healing problems (Table 1). There was a statistical difference on daily drain output (day 2, 3), with lower levels on scalpel group (Figure 1).

	Group A (n = 39)	Group B (n = 80)	*P value*
Age, years			
Mean ± SD	41.03 ± 8.07	38.50 ± 9.27	NS
Range	24.00 – 59.00	23.00-68.00	
BMI, kg/m^2			
Mean ± SD	27.74 ± 2.92	25.38 ± 2.93	<0.0001
Range	22.10 – 34.90	19.10 – 33.70	
Smoker, total no. (%)	2 (6.67)	5 (6.25)	NS
Previous abdominal operations, total no. (%)	31 (81.58)	56 (70.00)	NS
Previous bariatric surgery, total no. (%)	9 (23.68)	12 (15.00)	NS
Medical comorbidities, total no. (%)	18 (47.37)	17 (21.30)	<0.05
Weight specimen, g			
Mean ± SD	1366.14 ± 667.77	1087.47 ± 500.44	<0.05
Range	250.00 – 2850.00	330.00 – 2700.00	
Time until drain removal, days			
Mean ± SD	3.59 ± 2.01	6.24 ± 3.44	<0.0001
Range	2.00 – 6.00	2.00 – 21.00	
Drain output, mL			
Mean ± SD	276.84 ± 130.65	609.25 ± 460.21	<0.0001
Range	90.00 – 685.00	90.00 – 2925.00	
Local complications, total no. (%)	4 (10.26)	21 (26.25)	<0.05
- Seroma	0 (0)	15 (18.75)	<0.05
- Hematoma/bleeding	2 (5.13)	5 (6.25)	NS
- Infection	0 (0)	6 (7.50)	NS
- Healing problems	0 (0)	8 (10.00)	<0.05
- Necrosis	2 (5.13)	0 (0)	NS

Table 1. General characteristics and outcomes of both groups, n=119. (NS: Not Significant; SD: Standard Deviation)
* Group A, scalpel dissection (n=39); group B, diathermocoagulation on coagulation mode (n=80)

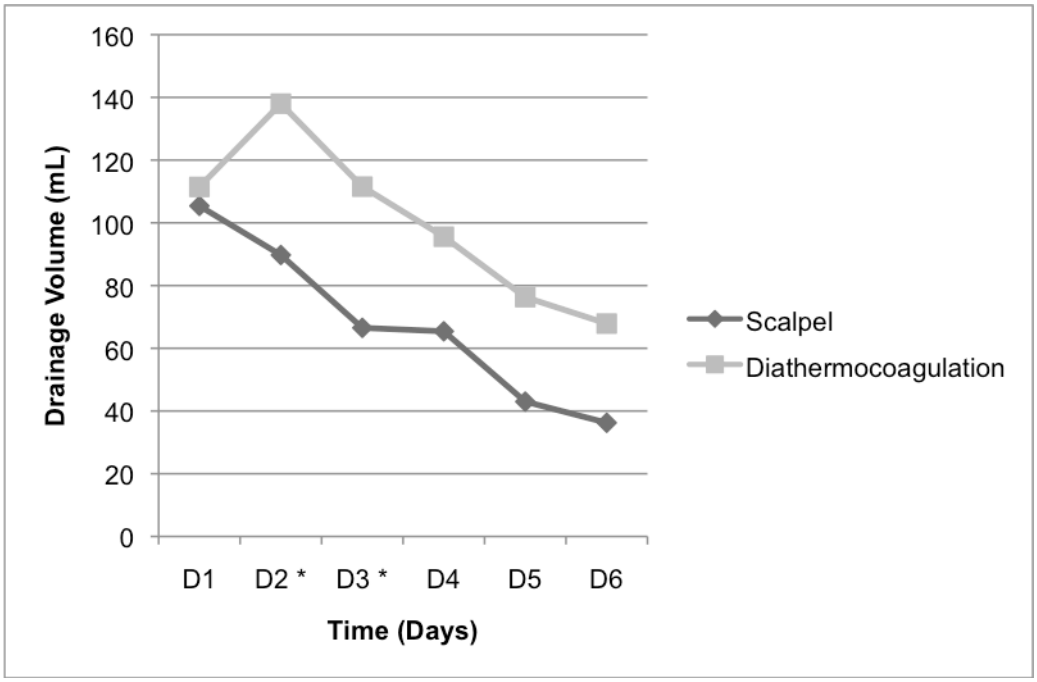

Figure 1. Average daily drain output from group A (scalpel dissection, n=39) and group B (diathermocoagulation on coagulation mode, n=80).
* Drain outputs were significantly lower in group A on postoperative day 2 and 3 (*p<0.05, t test*)

Conclusions: Performing abdominal dissection with scalpel showed benefits on patient recovery, reducing time requested for drain removal, drain output, seroma and healing problems incidence.

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