

OMT for Improving Return to Bowel Function Following Cesarean Delivery

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Abstract

This study aimed to evaluate whether a single treatment session with Osteopathic manipulative treatment (OMT) could reduce the time to return to bowel function in post Cesarean section patients. To this end, 24 women were randomized in alternating fashion to intervention and no-intervention groups. Those in the intervention group received a single session of OMT post operatively and patients were asked to report their first post-operative bowel movement and episode of flatus. There was insufficient evidence to demonstrate a statistically significant difference for either first passage of flatus or bowel movement. Although more research and power are needed to definitively determine whether there is a relationship between a dose of OMT and return to bowel function, this study did note positive results of the OMT treatment, as reported subjectively by study participants, making this an exciting pilot study to build upon.

Introduction

Osteopathic manipulative treatment (OMT) has historically been used to normalize bowel function in female patients, however limited data is available to show whether a single dose of targeted OMT will decrease the amount of time to return of bowel function in post-cesarean women and thus decrease time to discharge. Several articles have shown that targeted OMT can help with postoperative ileus, poor colonic inertia, and decrease pain, however, we were unable to find any studies which documented post-partum return to bowel function following Cesarean delivery.

Methods

We had two groups, a treatment group referred to as the "OMT group" and a non-treatment group referred to as the "Control group". Patients were randomly stratified into either group in alternating A-B-A-B fashion and management of care continued per routine. Those in the OMT group received a single session of OMT for a minimum of 5 minutes within the first 24 hours following cesarean section and those in the Control group did not receive OMT. Both groups were followed and asked to report the time of their first post-operative passage of flatus and bowel movement. If patients were discharged prior to passage of bowel movement, they were contacted within 24-48 hours following discharge to assess timing of first bowel movement post-operatively.

Results

The primary outcome results showed that mean time to flatus in the treatment group was 22 hours, and the mean time to flatus in the control group was 24 hours. See figure 1, p-value of 0.688.

The secondary outcome of mean time to stool in the treatment group was 73.7 hours, and the mean time to stool in the control group was 66.5. See figure 2, p-value of 0.632.

Distribution of Time to Flatus

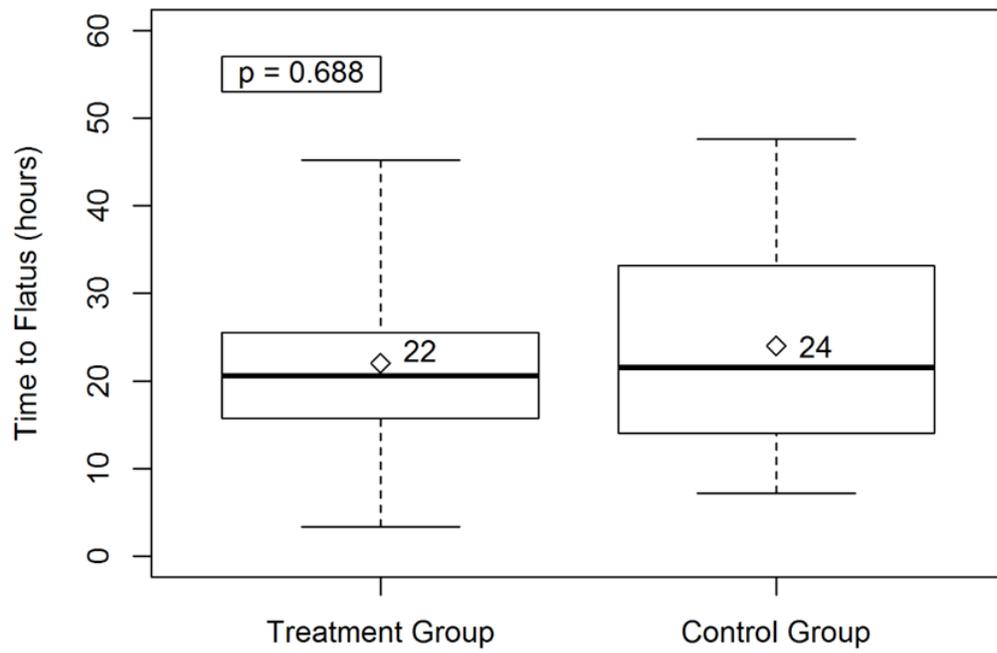


Figure 1

Distribution of Time to Stool

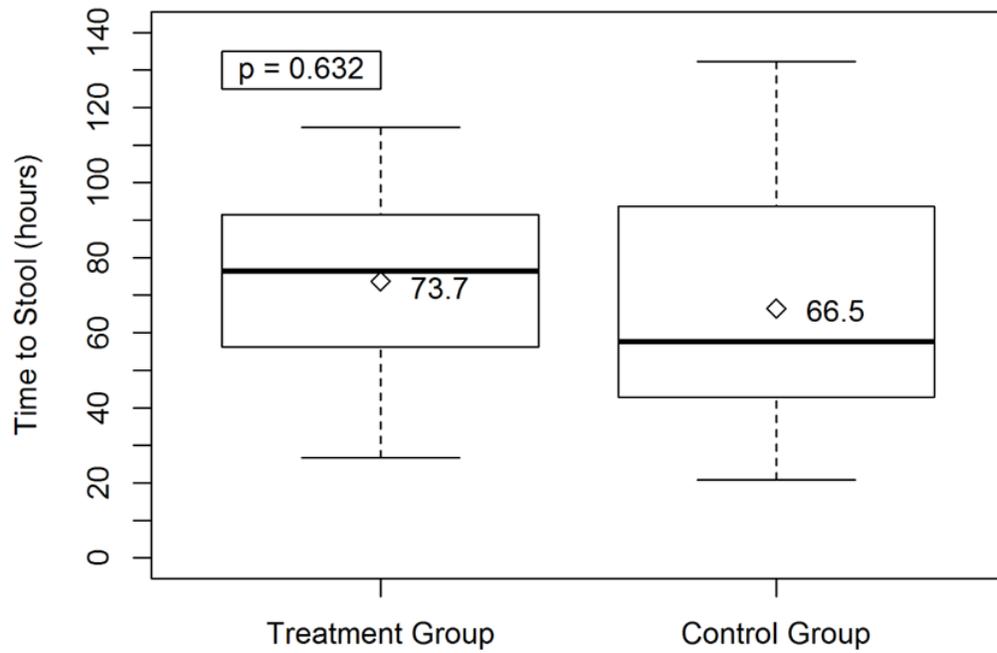


Figure 2

Descriptive Analysis

Variables	Group			P Value
	Total N=24(%)	Treatment Group N=12(%)	Control Group N=12(%)	
Age				0.967 ^T
N	24	12	12	
Mean ± SD	29.8 ± 4.8	29.8 ± 4.5	29.8 ± 5.2	
Median (min - max)	29.5 (22.0 - 40.0)	28.5 (25.0 - 40.0)	30.0 (22.0 - 39.0)	
Missing	0	0	0	
Race				0.784 ^{C +}
African American	4 (16.7)	1 (8.3)	3 (25.0)	
Caucasian	18 (75.0)	10 (83.3)	8 (66.7)	
Hispanic or Latino	2 (8.3)	1 (8.3)	1 (8.3)	
Missing	0	0	0	
GI motility agent				0.727 ^{C +}
Docusate	20 (83.3)	9 (75.0)	11 (91.7)	
No	2 (8.3)	2 (16.7)	0 (0.0)	
Senna-docusate	2 (8.3)	1 (8.3)	1 (8.3)	
Missing	0	0	0	
Anesthesia type given				0.478 ^{C +}
Epidural	2 (8.3)	2 (16.7)	0 (0.0)	
Spinal	22 (91.7)	10 (83.3)	12 (100.0)	
Missing	0	0	0	
Gestational				0.898 ^{W +}
N	24	12	12	
Median (min - max)	39.1 (34.1 - 40.4)	39.1 (36.9 - 40.4)	39.1 (34.1 - 40.0)	
Mean ± SD	38.4 ± 1.5	38.7 ± 1.0	38.2 ± 1.9	
Missing	0	0	0	
Gravida				0.833 ^{W +}
N	24	12	12	
Median (min - max)	3.0 (1.0 - 6.0)	3.0 (1.0 - 5.0)	3.0 (1.0 - 6.0)	
Mean ± SD	3.0 ± 1.5	3.1 ± 1.7	2.9 ± 1.3	
Missing	0	0	0	
Term_birth				0.498 ^{W +}
N	24	12	12	
Median (min - max)	2.0 (0.0 - 3.0)	2.0 (0.0 - 3.0)	2.0 (0.0 - 3.0)	

Table 1

Conclusions

There was insufficient evidence to demonstrate a statistically significant difference between the treatment and control groups with regards to either first passage of flatus or bowel movement. This is due primarily to low power. Despite having no statistically significant difference in time to flatus or time to stool, we did note improvement in the average time to flatus in our treatment group. No adverse outcomes were reported. Additionally, we received a great deal of subjective satisfaction from study participants with respect to neck and low back pain. In brief, treatment with OMT in post-Cesarean women may offer improved return to bowel function, improvement in pain control, and is not likely to cause any adverse outcomes. We believe expanding this study to other centers, increasing study participant numbers, and developing a standardized dose will help to better establish the role of OMT in post-Cesarean operative management.

References

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