

## EARLY VERSUS DELAYED ORAL FEEDING IN PATIENTS AFTER CAESAREAN SECTION

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### ABSTRACT

*Background and Objectives:* Traditional approach where patients receive nothing per oral route till 24 hours or return of bowel functions (passage of flatus or motion), followed by slow advancement of feed of solid diet post operatively is now challenged however safety of early oral feeding is still controversial. The present study was designed to compare the effect of early oral feeding versus delayed oral feeding after uncomplicated caesarean section in terms of time to return to bowel movement, to regular diet, duration of intravenous fluids and hospital stay and post operative gastrointestinal effects.

*Methods:* This study was done in department of Obstetrics & Gynaecology, Shalamar Hospital from Jan 2013 to Dec, 2014. In this study 200 pregnant woman who underwent cesarean section were randomized in two groups, Group A (delayed oral feeding) and Group B (early oral feeding), oral feeding was started as traditionally after 24 hours in group A whereas after 6 hours post operatively in group B. Their demographic, operative and post operative data were collected and entered in especially designed proforma and analyzed by SPSS version 18.

*Results:* The mean time to return to bowel movements in early feeding group was 6.13 hrs whereas in delayed group it was 9.29 hours. Time to regular diet in early feeding group was 11.39 hrs whereas in delayed feeding group it was 18.06 hrs. Mean duration of intravenous fluid was 7.86 hrs in early feeding group whereas it was 22.33 hours for delayed feeding group. There was no difference in the duration of hospital stay and post operative gastrointestinal effects between two groups.

*Conclusion:* Early oral feeding group (6 hours after caesarean section) has shorter time to return to bowel movements, regular diet, duration of intravenous fluid as compared to delayed oral feeding group (24 hours after caesarean section). There is no difference in post operative gastrointestinal complications between the two groups.

*Key Words:* Caesarean section. Oral feeding. Hospital stay.

### INTRODUCTION

Caesarean section is one of commonly done procedure in Obstetrics & Gynecology department everywhere in the world and it is common practice to withhold food for 24 hours or till return of bowel movements after caesarean section. This traditional approach is being challenged now-a-days, although the safety of early feeding after caesarean section is still controversial.<sup>1</sup> This study was done to compare the effect of early oral feeding versus delayed oral feeding after caesarean section in terms of time of return to bowel movement, to regular diet, duration of intravenous fluids, hospital stay and post operatively gastrointestinal effects.

### METHODS

**Study Design:** Randomized controlled trial.

**Setting:** This study was done in department of Obs-

etrics & Gynaecology, Shalamar Hospital from Jan 2013 to Dec, 2014.

In this study 200 pregnant woman who underwent caesarean section (elective and emergency) with regional anesthesia were randomly allocated in two groups, Group A (Delayed oral feeding) and Group B (Early oral feeding). Oral feeding was started as traditionally after 24 hours in group A whereas after 6 hours post operatively in group B. Woman with medical risk factor (e.g. diabetes, hypertension) and with obstetric risk factor (e.g. twin, prolong surgery, APH, PPH) were excluded from study. Their demographic, operative and post operative data were collected and entered in especially designed proforma and then analyzed by SPSS version 18. Main outcomes were time of return to bowel movement, to regular diet, duration of intravenous fluids and hospital stay and post operatively gastrointestinal effects.

**RESULTS**

Demographic data of both groups were same in terms of age, parity, as shown in table 1 whereas number of elective and emergency lower segment cesarean section, duration of surgery and intra-operative complications were similar in both groups. Graph 1 shows various indications of cesarean sections.

**Table 1:**

Group		N	Mean	Std Deviation	Std Error Mean
Age	A	100	27.75	4.366	0.437
	B	100	28.62	3.874	0.387
G	A	100	2.70	1.467	0.147
	B	100	2.63	1.488	0.149
P	A	100	1.34	1.148	.115
	B	100	1.34	1.183	.118
A	A	100	.39	.737	.074
	B	100	.38	1.196	.120

G \_Gravida, P \_Para, A \_Abortion

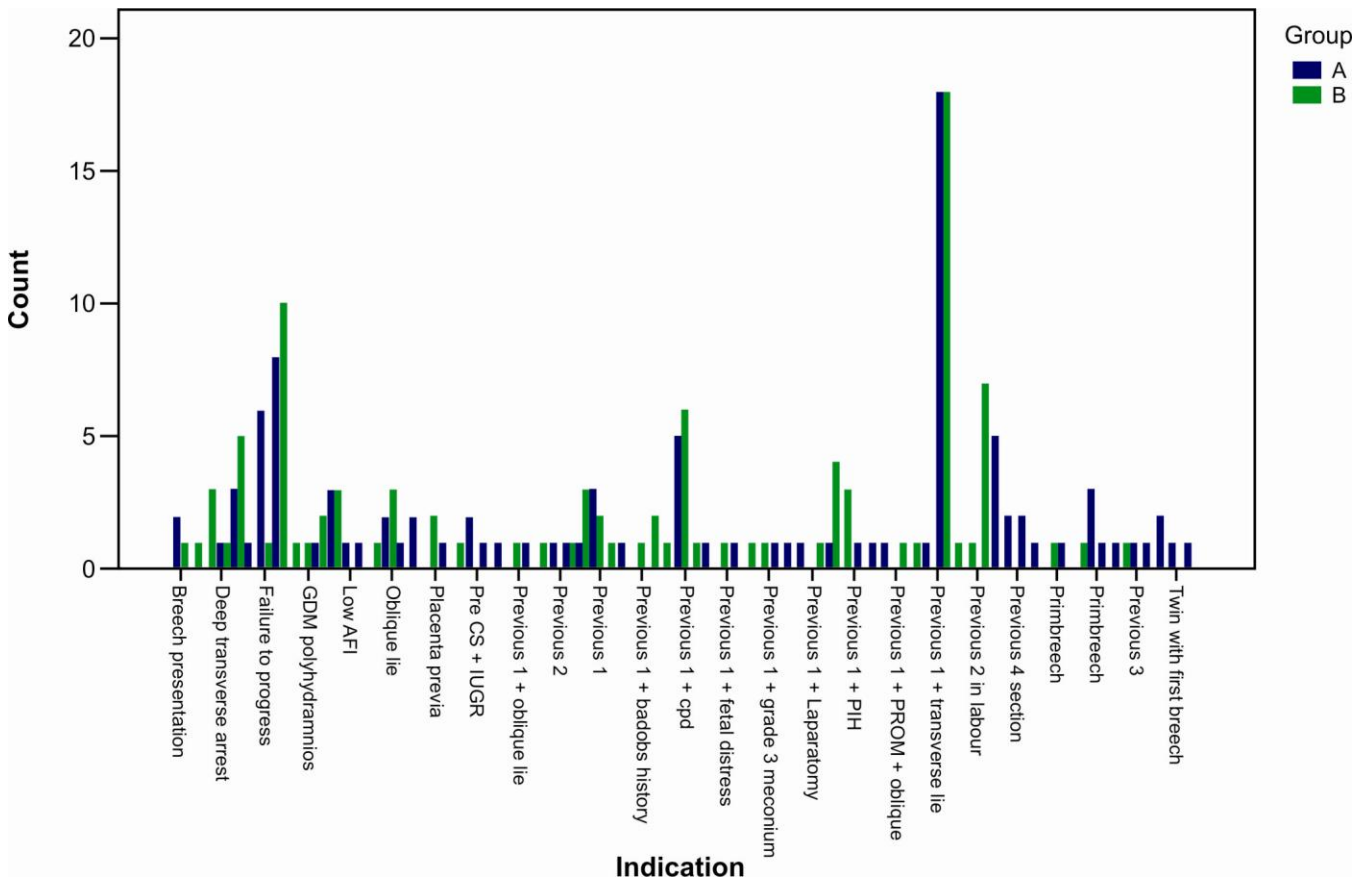
Table 2 shows the Mean , standard deviation and p value of time to return to bowel movements, regular diet, duration of intravenous fluids and hospital stay for group A & B.

Graph 2 is representing the gastrointestinal effects of both groups.

**DISCUSSION**

The traditional approach where oral feeding is prohibited after caesarean section till return of bowel activity or 24 hours post operatively is being challenged now. With changing surgeon’s attitude, early oral feeding after caesarean section has been considered.<sup>2</sup> Although safety of early oral feeding after caesarean section is still controversial.<sup>1</sup>

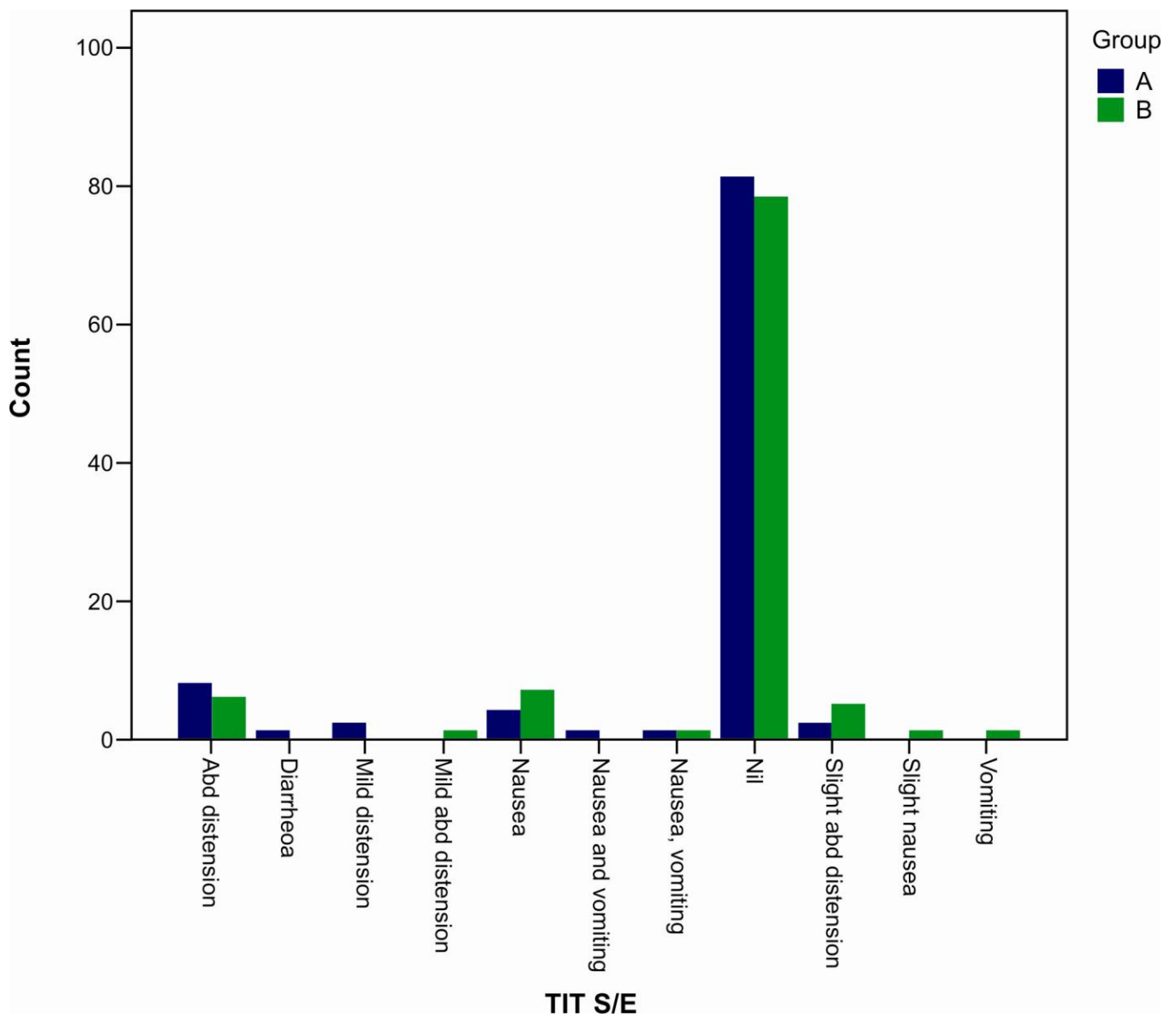
Different studies has been conducted in which effect of early oral feeding was compared to delayed oral feeding after caesarean section.<sup>3-5</sup> Early oral feeding group has been defined as early as 2 hours to 12 hours post operatively.<sup>3-5</sup> We have defined early oral feeding group in which oral feeding was started 6 hours after cesarean section and delayed oral feeding group was started feeding either 24 hours post operatively or when bowel sounds were present on routine ward round. Only those patients were included in study who underwent the procedure under regional anaesthesia



**Graph 1:** Various indications of Caesarean section.

**Table 2:**

Results	Group	Mean	Std. Deviation	P Value
Time of return to bowel movements	A	6.29	2.27	< 0.00
	B	6.13	.544	
Time return to regular diet	A	18.06	6.498	< 0.00
	B	11.39	3.143	
Duration of Intravenous fluids(hrs)	A	22.33	4.806	< 0.00
	B	7.86	3.399	
Duration of hospital stay (hrs)	A	62.74	15.74	0.009
	B	56.87	15.66	



**Graph 2:** Post operative gastrointestinal side effects.

and had no medical and obstetrical complications.

The demographic data for early and delayed oral feeding group were same including age, parity, number of elective & emergency cesarean section, duration of surgery, number of complications as was reported in the study by N Jalilian,<sup>3</sup> Kovavisarach.<sup>6</sup>

Early feeding is likely to have an impact on early return of normal bowel functions after uncomplicated surgery including caesarean section. Early oral feeding reduces the time required to return to normal bowel function,<sup>7</sup> as seen by Jalilian. Similar results we found in our study that return to normal bowel movement is 9.29 hours  $\pm$  2.27 in early feeding group versus 6.14 hrs  $\pm$  0.544 in delayed group gave p value < 0.00 i.e statistically significant. Return to normal bowel movement lead to early return to regular diet, that also lead to greater level of satisfaction as shown by Teoh WH.<sup>8</sup> Similar results were also found in our study.

The mean duration of intravenous fluids in delayed group is 22.3 hours  $\pm$  4.76 and in early feeding group was 7.86  $\pm$  3.39 which is very significant. Similar results were found by study done in KSA.<sup>3</sup> Short the duration of intravenous fluids causes early ambulation as additional benefits in early feeding oral group as compared to delayed feeding group.<sup>3,8,9</sup>

Although the length of hospital stay is directly affecting the economic burden of any of the patient. Gu O J, Chantarasorn V, Orji ED found to have shorter duration of hospital stay in early oral feeding group as compared to delayed oral feeding group.<sup>1,9,10</sup> But we had mean duration of hospital stay in early oral feeding group as 56.87 hrs  $\pm$  15.6 and delayed group as 62.7  $\pm$  15.7 hours. There is a slight difference in two groups in our study which is not statistically significant. This could be due to protocol of our department to discharge all uncomplicated post cesarean patients on second post operative day and our patients usually don't like to be discharged at odd timings due to transport problem. A study done at Kermanshah university of Medical science, Iran also found no difference in duration of hospital stay in early oral feeding group and delayed oral feeding group.<sup>(2)</sup>, which may be due to their division of early oral feeding group i.e 2 hours after surgery whereas delayed oral group was 6 hours post operatively.

The post operative gastrointestinal effects has been studied in early oral feeding and delayed oral feeding group by Chantarasorn V, Kovavisarach E, Jalilian N, Guo J, Izbizky, Adupa D, Oriji E O, Teo WH. All found to have no difference in post operative gastrointestinal complications e.g nausea, paralytic ileus, vomiting, abdominal distension etc among both groups.<sup>9,6,7,1,4,5,10,8</sup> Similar results were found in our study.

Early oral feeding and early stopping of intravenous fluid helped in early mobilization and will decrease the risk of thromboembolism. A larger study is

needed to evaluate this aspect.

Secondly we did not study the cost in these two groups, if that is done; early oral feeding group will definitely be cost effective.

It is **concluded** that early oral feeding group(6 hours after cesarean section) has shorter time to return to bowel movements and regular diet, duration of intravenous fluid as compared to delayed oral feeding group (24 hours after cesarean section. There is no difference in post operative gastrointestinal complications between the two groups.

#### CONTRIBUTION OF AUTHORS

Conception and plan of the study was made by LRD.SR did the literature search and wrote the article. SS, SR and LRD were responsible for data collection and revision.

#### Disclosure of Interest

The authors report no conflict of interest.

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