International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

A Comparative Evaluation of Caesarean Section by Misgav Ladach Technique and Conventional Technique

Shivani Singh[1], Kumkum Srivastava[2], Urvashi Verma[3], Preeti Vatsal[4], Aneeta Ranjan[5]

[1]Assistant Professor, [2]Professor & Head, [3]Lecturer, [4]Professor, [5]Junior Resident,
Dept. of Obstetrics & Gynecology Era's Medical College & Hospital, Lucknow (U.P.)

Corresponding Author: Shivani Singh

Received: 21/05/2015 *Revised: 02/07/2015* *Accepted: 06/07/2015*

ABSTRACT

Objective: To compare and evaluate the pre and post op advantages of Misgav ladach and conventional technique of cesarean section.
Method: This was a randomized prospective study conducted on 80 women undergoing a primary LSCS for various indications. Patients were randomly divided in to two groups of 40 each; group A underwent LSCS by Misgav Ladach technique and group B by conventional method .A per–operative and short term post-operative outcome of both groups were compared.
Result: The operating time, incision delivery interval and post-op pain was significantly reduced in group underwent LSCS by Misgav Ladach method in comparison to group who underwent LSCS by conventional technique.
Conclusion: Misgav Ladach method is an efficient time and cost effective method of LSCS.

Key words: Caesarean section, Misgav Ladach, pfannenstiel, delivery.

INTRODUCTION

Caesarean section is the most common surgery performed in obstetric. Conventional technique using pfannenstiel incision over the abdominal wall and semi lunar incision over the lower segment was popularized by Munroker in 1960s which is still practiced today. [1] It is important to examine every step in any operation to evaluate its necessity and efficacy in achieving its purpose with a view to find a better, simpler and most appropriate alternative surgical method. There is continues search for improved technique of caesarian section, Misgav Ladach technique is expected to be safe simple and of short duration, carry less post op morbidity and mortality.

Misgav Ladach technique was originally developed by Dr. Michael Stark at the Misgav Ladach hospital in Israel. [2] In this technique after incising the skin the abdominal wall layers are separated bluntly. The uterus is also stretched manually and closed in single layer while abdomen is closed in two layers.

The aim of present study is to compare the intra-operative and post operative outcome between the conventional technique and Misgav Ladach technique of lower segment caesarean section.

MATERIALS AND METHODS

This was a randomized prospective study conducted at department of Obstetrics and Gynaecology, Era's Lucknow Medical College and Hospital from the period of Oct. 2008 to Sept. 2009. All the 80 subject enrolled in the study were divided in to two groups of 40 patient each. All were undergoing emergency or elective primary caesarian section for various reasons. Group A or study group underwent LSCS by Misgav Ladach technique using Joel Cohen incision and group B or control group by conventional method using pfannenstiel incision.

Women with previous caesarian section, obstructed labour, previous abdominal surgery and rupture uterus were not included in the study.

Steps of Misgav Ladach method- [1]

A straight skin incision is given 3cm below the line joining the ant. Superior iliac spine, extremely superficial cuts only the cutis.

A nick is given in the mid 3-4 cm up to anterior rectus sheath which is cut transversely up to that much length. It is then extended by stretching the upper and lower edge of the cut rectus sheath in cranio-caudal direction.

The belly of the rectus muscle is pulled away from midline to respected side.

The parietal peritoneum is opened bluntly as high as possible by nibbling with the index finger.

Uterovesicle pouch is opened with scissors and bladder pushed down.

Lower uterine segment is opened by giving a nick with scalpel and extended laterally on each side applying traction with fingers.

Uterus is repaired in single layer.

Visceral and parietal peritoneum is left to heal on itself.

After closing rectus sheath with vicryl no.1, skin is repaired with interrupted mattress suture.

Steps of conventional method- [2]

1. Abdomen is opened by pfannenstiel incision.
2. Rectus sheath and peritoneum is cut transversely by sharp dissection separately.
3. Uterovesicle pouch is opened by scissor and bladder is pushed down.
4. A small nick is given on lower segment and extended bilaterally with scissors.
5. Uterus is closed in double layer
6. Visceral and parietal peritoneum is repaired.
7. After closing the rectus sheath. Skin is repaired by mattress suture.

This study was approved by ethical committee of Era's medical college Lucknow. The data were evaluated by SPSS statistical package version 16. Chi-square test was used to compare the difference in proportion in the two groups. Student's't' test was performed to see the difference between mean of two groups. The result were considered non-significant when $P > 0.05$.

RESULTS

Majority of the patients in both the group were in the age group of 20 -25 years (table 1). As shown in table2 duration of surgery was significantly reduced in study group as compared to control group ($p<0.001$). Table 3 demonstrate that use of suture was significantly less in study group as compared to control group ($p<0.001$). While table 4 shows no significant difference as regards blood loss between the two groups.

In table 5 study group shows significantly less pain ($p<0.001$) as compared to control group. Wound infection was seen in 3 cases (7.5%) of study and

5(12.5%) cases of control group while wound dehiscence was seen in 1case(2.5%) of study and 2 cases(5%) of control group which was found insignificant statistically as shown in table 6.

Post op recovery is shown in table 7 in which time for return to bowel function(7.28+-o.85) and time to ambulation (25.55+-1.47)were significantly less in study group as compared to control group. Mean post op stay was significantly less in study group as compared to control group.

Table 1: Age Distribution

Age Group	Study (n=40)		Control (n=40)	
	No.	%	No.	%
<20 (A1)	5	12.5	2	5.0
20-25 (A2)	27	67.5	24	60.0
26-30 (A3)	4	10.0	11	27.5
>30 (A4)	4	10.0	3	7.5

Table 2: Duration of surgery (In minutes)

Type of suture material	Study group(n=40)		Control (n=40)		Statistical significance	
	Range	Mean+- SD	Range	Mean+-SD	"t"	"p"
Catgut	70-90	83.00+-7.14	150-180	161.90+-7.71	47.481	<0.001
Vicryl	70-90	76.50+- 7.86	65-90	84.13+-7.50	-4.438	<0.001
Total length	140-180	167.13+-14.31	220-270	238.40+-14.51	22.115	<0.001

Table 3: Suture material used (Length in cm)

Type of suture material	Study group(n=40)		Control (n=40)		Statistical significance	
	Range	Mean+- SD	Range	Mean+-SD	"t"	"p"
Catgut	70-90	83.00+-7.14	150-180	161.90+-7.71	47.481	<0.001
Vicryl	70-90	76.50+- 7.86	65-90	84.13+-7.50	-4.438	<0.001
Total length	140-180	167.13+-14.31	220-270	238.40+-14.51	22.115	<0.001

Table 4: Blood Loss (ml)

Blood loss	Study (n=40)		Control (n=40)		Statistical significance	
	Range	Mean+-SD	Range	Mean+- SD	"t"	"p"
In suction machine	270-500	399.75+-60.79	300-600	426.75+-69.78	1.845	0.069
In Mop	150-200	186.25+-19.24	150-200	181.25+-24.42	-0.995	0.323
Total blood loss	420-700	586.00+-74.14	500-800	608.00+- 82.81	1.246	0.216

Table 5: Pain Score

Study (n=40)		Control (n=40)		Statistical significance	
Range	Mean+- SD	Range	Mean+- SD	"t"	"p"
3-5	3.90+-0.59	4-6	4.53+-0.75	4.139	<0.001

Table 6: Post operative condition of abdominal wound

Post-op condition of abdominal wound	Study(n=40)		Control (n=40)		Statistical significance	
	No.	%	No.	%	X2	P
Discharge from stitch line	3	7.5	2	5	0.213	0.644
Wound infection	3	7.5	5	12.5	0.556	0.456
Wound dehiscence	1	2.5	2	5	0.346	o.55

Table 7: Post –op recovery

Event	Study (n=40)		Control (n=40)		Statistical significance	
	Range	Mean+- SD	Range	Mean+- SD	"t"	"P"
Return to bowel function(hrs)	6-8	6.65+-0.80	6-9	7.28+-0.85	3.388	0.001
Time to ambulation(hrs)	24-26	24.75+-0.87	24-28	25.55+-1.47	2.967	0.004
Post-op stay	6-18	9.18+-2.66	5-25	11.25+-4.79	-2.397	0.019

DISCUSSION

Caesarean section is a very commonly performed operation in obstetrics. However no method can replace Lower segment caesarian section as a means of abdominal delivery of the fetus when indicated. Therefore any modification in the technique which reduces operating time,

blood loss and post –op complication would be welcomed.

The operating time for skin incision to delivery of the baby was 5.1/-+3.23 mt. versus7.2+-5.23mt by Misgav ladach technique and conventional technique respectively. As incision to delivery interval is reduced, this technique can be used in cases of fetal distress. [3] The mean operating time in the Misgav Ladach group was found to be35.18+-9.80mt. as compared to 48.29+-16.23mt in the conventional group. Short operating time is associated with decrease in duration of anesthesia. [4,5] As the total length of suture used is reduced, the method becomes cost effective. [6,7] The mean blood loss in our study was 586.00+-74.14 ml in Misgav group versus 608.00+- 82.81 ml in conventional group. There is no statistically significant reduction of blood loss by Misgav Ladach method. [8] In our study the reduction of pain was significant by Misgav Ladach technique. [9,10] Non closure of visceral and parietal peritoneum is associated with reduction in operating time, reduction in post-operative pains and is more cost effective. [11]

CONCLUSION

Misgav Ladach technique is an efficient time and cost effective method. However pre and post operative parameters depend upon a number of factors like aseptic technique, surgeon's experience and hospital protocol of post-operative care etc.

ACKNOWLEDGEMENTS

We thank Mr. Zeeshan Ali Zaidi for his assistance in the statistical analysis of the data

REFERENCES

1. Munro Kerr J.M., Chassar Moir J: Text book of operative obstetric, 5th edition published by ballier, Jindall and cox, London chapter 22.
2. Verdan S, Behera RC Kathpalia SK, Bhattacharya TK: Modified Technique of LSCS: The Misgav Ladadh method'.MJAFI, 2005;61: 271-272.
3. Z.Fatusic, A.Kurzak, E. Jasarevic and T. Hafner: The Misgav Ladach method- a step forward in operative technique in obstetric. Acta Obstet Gynecol scand.1999, 78 (1): 37-41
4. Moreira P, Moreau JC, Faye ME Ka S, Kane Gueys SM, FAYE EO, Dieng T, Diadhio F: Comparison of two caesarian technique: classical versus Misgav Ladach cesarean. J. Gynecol. Obstet Biol. Reprod 2002. 31 (6): 572-6
5. Darj E, Nordstrom MH: the Misgav Ladach method for caesarian section compared to the pfannenstiel method. Acta Obstet Gynaecol scand. 1999;78(1):37-41.
6. Zienkowicz Z, Suchoki S,Sleboda H, Bojarski M : caesarean section by the Misgav Ladach with the abdominal opening surgery by the Joel Cohen method. Ginkol Pol. 2000; 71 (4): 284-7.
7. Poonam, Banerjee B, Singh SN, Raina A: The Misgav Ladach method: A step. forward in the operative technique of caesarean section. Kathmandu University. Medical journal 2006, vol.4 No.2 Issue 14, 198-202
8. Xavier p, Ayres De-Campos d, Reynolds A, Guimaraes M, Costa-Santor C, Patricio B: modified Misgav Ladach versus the pfannenstiel Kerr technique of caesarian section: a Randomized trial'. Acta Obstet gynecol scand, 2005; 84 (9): 878-882.
9. Ansaloni L, Brundisni R. Morino G, Kiura A: Prospective randomized, comparative study of Misgav Ladach

versus traditional cesarean section at Nazareth Hospital, Kenya. World J. surge. 2001; 25 (9):1164-72
10. Karat LS Chitra, Nirmala AP, Radhakrishna Gayetri; Misgav Ladach caesarean section versus Pfannenstiel caesarean section. J Obstet Gynecol Ind. 2004;54(5): 473-477.
11. Archana Sharma, Monika Singh, Suneet Kumar Upadhyaya, Arpita De: A comparative study between modified Misgav Ladach Technique and Pfannenstiel method of lower segment caesarean section. National Journal of Medical research. 2013; vol 3(3): 286-288.

How to cite this article: Singh S, Srivastava K, Verma U, et. al. A comparative evaluation of caesarean section by Misgav Ladach technique and conventional technique. Int J Health Sci Res. 2015; 5(8):94-98.

****

International Journal of Health Sciences & Research (IJHSR)

Publish your work in this journal

The International Journal of Health Sciences & Research is a multidisciplinary indexed open access double-blind peer-reviewed international journal that publishes original research articles from all areas of health sciences and allied branches. This monthly journal is characterised by rapid publication of reviews, original research and case reports across all the fields of health sciences. The details of journal are available on its official website (www.ijhsr.org).

Submit your manuscript by email: editor.ijhsr@gmail.com OR editor.ijhsr@yahoo.com