

Misgav Ladach Technique of Caesarean Section for Feto-Maternal Emergencies

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Summary

A total of 180 mothers between February '97 and July '98 were subjected to Caesarean Section by Misgav Ladach Technique to study the beneficial effects of this technique in feto-maternal emergencies. Very short incision-delivery interval (1 ½ min. to 3 ½ min.) and short total operative time (18 min. to 30 min.) made the technique in our experience superior for the safety of fetuses as well as for mothers. Intra-operative and postoperative morbidity were few. Mothers could regain control and recover quickly that led to better care and breast feeding of the babies. We conclude that the Misgav Ladach technique should be popularised as technique of choice for elective as well as emergency caesarean sections.

Introduction

Caesarean Section is the commonest major surgical procedure in modern days practice and situations often demands its performance in the quickest possible operative time for fetal or maternal emergencies without compromising the surgical excellence. We have found the answer to this in Misgav Ladach technique in our practical experience with 180 cases performed between February '97 and July '98. Misgav Ladach General Hospital in Jerusalem, Israel, which is a centre of various kinds of surgical technique modifications developed a concise, very simple to perform operation for abdominal delivery of fetuses with reduced morbidity and very short operative time (Stark M 1994, Holmgren and Sjolohm 1996).

A short description of the procedure:-

The abdomen is opened by Joel Cohen incision

by a superficial transverse cut only in the cutis about 3 to 3.5 cm below an imaginary line drawn between the antero-superior iliac spines. At the centre where there are no large blood vessels the cut is made deeper to reach the fascia where a small transverse cut is made with the tip of the scalpel blade which is then extended for about 2 cm both ways underneath the fat tissue and blood vessels by holding the scalpel blade in the reverse direction or by pushing the slightly open tip of a pair of straight scissors. The fascia is then stretched caudally and cranially by using index fingers of both hands. The surgeon than makes room between the recti by pushing his index and third fingers of Rt. Hand so that peritoneum is reached. Then the assistant also places his index and third finger of Rt. Hand from the opposite side under the muscles like the surgeon and they simultaneously stretch the muscles, fascia, fat tissue and blood vessels by manual traction laterally placing the index and third fingers of the other hand over the fingers of the first hand. The peritoneum is opened by a transverse cut and then stretching it in a

caudal cranial direction the cut is extended laterally. The peritoneum over the lower uterine segment is cut transversely with the tip of a scalpel blade while the assistant is stretching it using a Doyen's retractor guarding the bladder. The incision over the peritoneum is then made deeper to open the lower segment or it is opened at a lower level by pushing the bladder with index finger whenever required.

After delivering the fetus and the placenta the uterus is exteriorized for easy stitching (Hurshey and Quilligan 1978). The uterine incision is stitched in one layer (Pritchard and McDonald, 1976, Hauth et al 1992 Jelsema et al 1993) using No. 1 chromic catgut or No. 1-0 Vicryl. In Misgav Ladach General hospital they do not stitch the peritoneum (both visceral and parietal) adopting the works of Ellis (1962, 1980). Pietrantonio et al (1991), Hull & Varner (1991). We practised peritoneal suturing (particularly in cases with (i) early membrane rupture and (ii) bleeding peritoneal edges on lower segment) as well as leaving the peritoneum unsutured. Rectus muscles are not approximated. The skin and subcutis are closed by widely spaced silk sutures after stitching the rectus sheath. Stitches are removed on the 5th or 6th post operative day depending on the hour of C.S.

Result Analysis

Of a total of 180 women, operated by this method (M.I. Technique), 106 had Caesarean Section as emergency decision and the rest 74 had elective operation. No post C.S. case was subjected to this technique of C.S.

Various demographic and antepartum characteristics of the study group are presented in Table-I.

Table-I
Showing various demographic and antepartum characteristics (N=180).

Characteristics	No.	Percentage
• Built		
a) Average, Slim	127	70
b) Obese	53	30
• Singleton Pregnancy	172	95.6
• Period of Gestation		
a) Above 37 Wks.	163	90
b) Below 37 Wks.	17	10
• Hb level		
a) 80% or above	107	60
b) Below 80%	73	40
• Hypertensive Disorder	36	20
• APH	20	11
• PROM	29	17
• Presentation/Lye		
a) Cephalic	146	81
b) Breech	27	15
c) Oblique / Transverse	7	4

Table-II shows the operative outcome. For easy delivery of high floating fetal head Wrigley's Forceps were used often. Good muscle relaxation was made mandatory so that recti did not come in way of delivery of the baby.

Table-II
Shows the Operative Outcome (N=180)

• Incision delivery interval	- 1Min 50sec (5 th Min to 3 rd Min)
• Hemostatic procedure required in abdo. Wall	- 9 (5%) cases
• Peritoneum Stitched	- 80 (45%) cases
• No. of skin (including subcutis) stitches per case.	4 (3 to 5)
• Total operative time required :-	
a) Without peritoneal suture	- 21 Min (18 to 36 Min)
b) With peritoneal suture	- 24 Min (21 to 30 Min)

Post operative outcome are shown in Table III. I.V. fluids were discontinued in 14-18 hrs and the mother became ambulatory within 24 hrs.

Table-III
Shows the Post operative Outcome. (N=180)

Outcome	No. of cases	Percentage
• Above 1g% decrease in Hb level after 48 hrs.	34	19
• Secondary PPH	1	2.2
• Required blood transtusion (excluding APH cases)	3	1.7
• Retention of urine	1	0.6
• Post op. Ileus	4	2.2
• Puerperal sepsis	6	3.3
• Wound Infection	2	1.1
• Serous discharge from wound	3	1.7
• Wound Hematoma	Nil	
• Wound Dehiscence	Nil	

Conclusion :-

Our experience with M.I. technique for emergency as well as elective C.S. is encouraging for toto maternal outcome.

Following benefits of this technique may be concluded:-

1. Very short incision delivery interval - Safer for babies
2. Short operative time - Safer for mother.
3. Negligible intraoperative and postoperative morbidity.
4. Tissues are separated along connective tissue fault lines - No damage to muscles, blood vessels and nerves - rapid and complete healing with less febrile morbidity and postoperative pain.
5. Mothers regain control quickly, the babies get better care including breast feeds by mother

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