Modulated Mouchel Incision in Obstetric Surgery

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Summary: The Authors present 10 clinical cases in which a modulated Mouchel incision was performed over the period from 1.4.1989 to 1.4.1990 to achieve caesarean section. The postoperative course was uneventful in 9 cases with no complications. The only complication observed was slight left parametritic inflammatory infiltrate in one case only. The laparotomy wound healed uneventfully in all 10 cases. Thus, there were no complications contra-indicating the use of Mouchel's technique, which presents demonstrable advantages in the execution of caesarean sections. These consist in rapidity of execution, no need for extensive subfascial detatchment, ease of fetal extraction, straightforward reconstruction and an aesthetically valid final result.

INTRODUCTION

A recent WHO survey of delivery methods in Europe establishes the incidence of caesarean section as lying in the 4 to 12.7% range [1]. In Italy, partial data for 1986 indicate an 18.1% incidence [2]. Caesarean section, however, is by no means risk-free either in terms of infective-haemorrhagic complications [3] or in terms of morbidity directly related to the surgical technique. As the patients are often young primigravidae, the obstetric requirements to be taken into account must be matched by a technique which is easy to use, relatively rapid and capable of affording an extensive surgical exposure.

The modulated transrectus suprapubic transverse incision was proposed by Mouchel [4, 5] as a dericative of Maylard's incision [6] and was publicised by the French school [7, 8], thus progressively replacing the classic Pfannenstiel incision, over which it presents indisputable advantages.

The present study was undertaken in order to evaluate the validity and possible complications of the modulated Mouchel incision as performed in 10 caesarean sections in our Institute over a period of 12 months.

MATERIAL AND METHODS

Over the period from 1st April 1989 to 1st April 1990 we used a modulated Mouchel incision in the execution of caesarean section in our Institute.

The technique consists of a suprapubic horizontal cutaneous section simultaneously involving not only the skin, but also the subcutis and the aponeurosis which is not detached from the muscle. The transverse fascia and the peritoneum are transected transversely at a certain distance from the bladder, taking care to avoid the epigastric vessels situated laterally.

The modulated muscular section starts from the pyramidal muscle and is extended laterally

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to the rectus muscle according to the operator's requirements. In some cases, the rectus muscles do not need to be transected and are merely displaced laterally in relation to the midline. In other cases, transection of one-third of their thickness or of their inner half is more than sufficient.

The indications for caesarean section ranged from election on account of breech presentation in primigravidae, placenta praevia and previous caesarean section, to emergency surgery caused by materno-fetal pathology (lack of engagement, acute fetal distress, ruptured uterus and dynamic dystocia).

RESULTS

The postoperative course was uneventful in 9 out of 10 patients operated on. The only complication observed was slight left parametritic inflammatory infiltrate leading to hyperpyrexia from postoperative day 1 to day 12 in one case only, despite prompt institution of antibiotic therapy. The laparotomy wound, however, healed uneventfully and did not require administration of extra amounts of analgesics in view of the limited pain symptoms. Mobilization was postponed only a few days because of the patient's high temperature.

In the other 9 cases, the laparotomy wound healed without complications; neither haematomata nor abscesses of the abdominal wall occurred, and none of these patients complained of postoperative genito-abdominal pain of such a degree of intensity as to require extra doses of analgesics as compared to those routinely administered with the Pfannenstiel incision; mobilization was achieved as early as postoperative day 1 (Table 1).

DISCUSSION AND CONCLUSIONS

On the basis of the data available to us, the Mouchel incision carries no risk of any type of complication contra-indicating its use. As compared to other types of incision, indeed, it present certain advantages, which will be discussed below and which make it particularly suitable for performing caesarean sections, especially in the presence of risk factors such as fetal megalosomy, multiple pregnancy, or abnormal presentation, requiring more extensive exposure of the operating field.

Among the other techniques proposed, the classic Maylard operation and the modified version proposed by Cherney [9] present characteristics which now make them unacceptable. The subpubic disinsertion of the rectus muscles, as proposed by Cherney, carries an associated high incidence of peri- and postoperative complications (difficult reconstruction, high incidence of abscesses and haematomata of the abdominal wall).

As compared to the Maylard incision, the Mouchel technique produces a more satisfactory aesthetic effect, and suturing of the modulated muscular incision proves straightforward, thus permitting a simple, solid reconstruction.

Compared to the Pfannenstiel incision, the advantages of the Mouchel technique consist in the broader aperture, and the fact that there is no need for the extensive detachment of transverse fascia and muscle necessary in the Pfannenstiel incision, nor for vertical transection of the peritoneum, a procedure which in some cases may cause bladder lesions and which, moreover, produces genito-parietal adhesions. Iterative incisions are another point militating against the Pfannenstiel technique, in addition to the longer duration of the operation and the fact that it is impossible to achieve further extension of the incision.

Modulated section of the rectus muscles leads to a slightly inferior parietal solidity, but saves time in the execution of the incision and the suturing.

Reconstruction of the muscle plane is only mandatory for aesthetic reasons, since, if the section is too broad, simple apposition of the muscle may give rise to a fibrous repair which, however, is not visi-

Table 1. – *Indications for caesarean section, patient and newborn characteristics and postoperative course.*

Case	Indication for c.s.	Parity	Week	Newborn	Parietal haematomata and/or abscesses	Fever*	Suture	Postoperative pain and need for analgesics***	Mobilization	Abdominal tractability
C. E.	Polyhydramios previous c.s.	1001	39	Male 3170 g Apgar 9	No	No	Reg.	No	Reg.	Yes
B. E.	Breech presentation	0010	38	Male 2980 g Apgar 9	No	No	Reg.	No	Reg.	Yes
P. N.	Placenta praevia	0010	37	Female 2470 g Apgar 5-8	No	No	Reg.	No	Reg.	Yes
T. M.	Breech presentation	0000	37	Male 3770 g Apgar 10	No	No	Reg.	No	Reg.	Yes
P. E.	Breech presentation	0000	39	Male 3140 g Apgar 9	No	No	Reg.	No	Reg.	Yes
L. E.	Ruptured uterus previous c.s.	1001	39	Female 5000 g Apgar 9	No	No	Reg.	No	Reg.	Yes
C. G.	Non-engagement	0000	38	Female 3530 g Apgar 9	No	Yes **	Reg.	No	Delayed	Yes
L. A.	Fetal distress and gestosis, IUGR	0000	34	Male 1600 g Apgar 4-7	No	No	Reg.	No	Reg.	Yes
S. P.	Mechanical dystocia	0000	41	Male 3290 g Apgar 8-9	No	No	Reg.	No	Reg.	Yes
R. C.	Dynamic dystocia previous c.s.	1001	41	Female 3860 g Apgar 8-9	No	No	Reg.	No	Reg.	Yes

* Temperature was considered feverish only when exceeding 38 °C, excluding the first 24 h postpartum.
** Due to slight left parametritic inflammatory infiltrate.
*** Only postoperative pain of moderate-severe intensity requiring high doses of analgesic was considered.
c.s. = casarean section; Reg. = regular.

ble in the course of an iterative operation owing to the fact that only the posterior surface of the muscle is involved. In our opinion, however, suturing of the muscle should always be done, even though the absence of sutures will not prejudice the result.

As compared to the Pfannenstiel technique, the Mouchel incision carries a lower incidence of haematomata and abscesses of the abdominal wall. The reason for this is that extensive subfascial detatchment is not necessary. In addition, it should be borne in mind that, in the Pfannenstiel incision, there is sometimes inadequate muscle relaxation, which may prove a serious cause of difficulty in extracting the fetus, and that this type of incision should certainly be avoided in obese patients.

In conclusion, then, the Mouchel modulated transrectus incision presents unquestionable advantages in the execution of a caesarean section. Transrectus incision is most clearly justified, in fact, in the execution of caesarean sections, particularly in the presence of risk factors calling for a broader exposure of the operating field; it is rapid and allows easy fetal extraction, while reconstruction is simple and solid, and the result is aesthetically satisfactory, as the incision line is shorter than in all other techniques. It is predictable that the intrinsic advantages of this technique will lead to its more extensive use in preference to all other types of horizontal skin incision.

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