

Management of labour following caesarean section in a developing country

A. GRANJA - E. GOMES - A. BUGALHO
F. MACHUNGO (*) - G. CARLOMAGNO (**)

Summary: During recent years, the observed rise of the CS rate (17% in 1989) led the medical staff of the Maputo Central Hospital to consider the opportunity of admitting to trial of labour selected pregnant patients following one previous CS. The present study retrospectively evaluates maternal and fetal outcome following the adoption of this policy. 94 (52.51%) of 179 study group patients, having one previous CS, delivered vaginally after trial of labour. No maternal deaths were recorded among these patients. A very low (1.67%) maternal morbidity rate was observed. Five stillbirths and one early neonatal death occurred among the study group, accounting for a perinatal mortality rate of 33.52‰, much lower than the overall hospital perinatal mortality recorded figure (68‰).

INTRODUCTION

Due to growing Caesarean Section (CS) rates, much attention has been paid in many developed Countries (^{2, 7}) to the problem of labour management following CS. Recent studies (^{1, 3, 5, 6, 8}) seem to indicate that, apart from cases of recurrent indication for CS, a trial of labour is a valid and safe alternative to the old « dictum » of Craigin (⁴): "Once a caesarean, always a caesarean".

The problem of labour management following CS has now to be faced also from the maternity units of some developing countries where, according to the current standards of perinatal medicine, a significant rate of CS is observed. This is the case of the Department of Obstetrics and

Gynaecology of the Maputo Hospital Central, the reference maternity unit for high risk pregnancies, in a town of 1,5 million inhabitants with a 40‰ birth-rate, where, in spite of the shortage of human and economic resources, 15,000 infants are delivered every year at a perinatal mortality rate of 68‰. During recent years the growing CS rate (17% in 1989) led the local medical staff to consider the opportunity of a trial of labour following previous CS. This happened for many reasons: one, applying also to obstetric case policy of developed countries, is based on the proved safety of this management (^{3, 5, 6, 8}), others more specifically applying to the local clinical and sociocultural background. First of all, a large number of previous CS were made for obstructed labour due to the patient's very young age, a condition presumably not always recurrent during following pregnancies. Secondly, the wid-

(*) Hospital Central, Dept. of Obstetrics and Gynaecology - Maputo (Moçambique)

(**) MAE, DGCS - Rome (Italy)

espread wish for large families could be frustrated by the infertility which often follows repeated CS. Lastly, CS repeat increases the risk of maternal morbidity and mortality if the mother, as often occurs, fails to refer to hospital during future pregnancies.

On these premises it was decided to admit to trial of labour following CS selected pregnant patients: namely those having only one previous CS for non recurrent indication and no indication to elective CS in the present pregnancy. This study retrospectively evaluates maternal and fetal outcome following the adoption of this policy.

PATIENTS AND METHODS

3,296 patients delivered at the Central Hospital between May 5 and July 31, 1989. During this period of time the observed CS and perinatal mortality rates were 16.99% and 68% respectively.

A total of 211 (6.4%) of these patients had one or more previous CS, most of them (179: 5.43%) having only one previous CS.

Failing reliable information concerning previous CS, and indications for elective CS being absent in the present pregnancy, all 179 patients with a history of one previous CS (study group), according to the adopted protocol, were admitted to trial of labour. 77 of these patients (subgroup A) had already delivered vaginally, once or more, following one CS, while 102 of them (subgroup B) were at their first trial of labour following CS. To accommodate the local shortage of facilities, such as intrauterine pressure and fetal pH monitoring apparatus, our guidelines excluded the use of oxytocic drugs for labour induction or augmentation.

For the goals of the present study, obstetric records of 179 study group patients were reviewed for mode of delivery, maternal morbidity (CS scar dehiscence, uterine rupture, hysterectomy, low urinary tract injuries, post-partum infective complications) and mortality, neonatal birthweight and outcome. No reliable data were available concerning gestational age.

RESULTS AND DISCUSSION

In Table 1 we report the delivery mode and concurrent maternal morbidity obser-

ved among study group, subgroup A and subgroup B patients.

More than half (52.51% of 179 study group patients, having one previous CS, delivered vaginally after trial of labour. As a comment, we must remember that, failing reliable information in this regard, we could not preliminarily select our patients according to previous CS indication. No maternal deaths were recorded among these patients. A very low (1.67%) maternal morbidity rate was observed: one case of scar dehiscence occurred, during trial of labour, which was repaired during subsequent CS; one hysterectomy was performed after true uterine rupture occurred extracting the fetus during CS and the same case accounts for a urinary tract (bladder) injury, promptly repaired without sequelae; another hysterectomy was necessary to control uterine bleeding in a case of placenta accreta diagnosed during CS. The comparison between subgroups A and B seems to indicate that trial of labour outcome is quite independent from the history of vaginal deliveries following previous CS.

Fetal weight could have influenced the trial of labour outcome, given the significantly ($p < 0.01$) higher mean birthweight (3231 g) of infants delivered through CS, compared to that of vaginally delivered infants (3018 g).

In Table 2 we report post-partum infective complications correlated to different delivery modes.

While not reaching statistically significant difference, a greater frequency of overall complications was observed following CS. Only one seriously complicated case, endometritis associated to peritoneal infection following CS, occurred, which required relaparotomy and hysterectomy; all other cases were discharged in good health.

5 stillbirths and one early neonatal death (due to prematurity) occurred

Table 1. – *Delivery mode and concurrent maternal morbidity among study group, subgroup A and subgroup B patients.*

	Study gr. (179)		A subgr. (77)		B subgr. (102)	
	No.	%	No.	%	No.	%
<i>Delivery</i>						
Spontaneous	88	49.16	45	58.44	43	42.15
Vacuum extractor	6	3.35	#		6	5.89
CS	85	47.49	32	41.56	53	51.96
<i>Concurrent maternal morbidity</i>						
Scar dehiscence	1	0.55	#		1	0.55
Hysterectomy	2	1.17	#		2	1.17
Urinary tract inj.	1	0.55	#		1	0.55
Overall morbidity	3	1.67	#		3	1.67

Table 2. – *Post-partum infective complications and delivery mode.*

	Vaginal delivery (94)		CS (85)	
	No.	%	No.	%
<i>Infective complications</i>				
Fever	3	3.19	4	4.70
Wound infection	#		3	3.52
Metritis	#		1	1.17
Overall complications	3	3.19	8	9.41

among the study group, accounting for a perinatal mortality rate of 33.52%, much lower than the overall hospital perinatal mortality figure (68%). Only one still-birth, an intrapartum death case associated with scar dehiscence occurred during trial of labour, was put in relation to the adopted policy, but could probably have been avoided, had better information about previous CS indication been available.

CONCLUSIONS

In the absence of contraindications pertaining to the current pregnancy, it seems a valid policy, safe enough for both mothers and fetuses, to admit to trial of labour all

pregnant patients following one previous CS. This is more valid for those women who have already delivered vaginally following previous CS. With cautious labour monitoring, and excluding the use of oxytocic drugs, this management can be safely adopted also when information is lacking about previous CS indication.

The result of the adopted policy was a reduction in the number, a remarkable fact in developing Countries, given the existing need for: saving of economic and human resources, rapid hospital bedplace turnover and reduced post-partum infective sequelae. Furthermore, the wish for large families, widespread in these Countries, is most likely to be met by avoiding as many CS as possible.

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Address reprint requests to:
G. CARLOMAGNO
Scuola Autonoma di Ostetricia
C.P. 201 - 86170 Isernia (Italy)