



Spontaneous or Systematically Induced Labor for the Termination of Twin Pregnancies

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The best time for twin delivery is at 38 or 39 weeks gestation. Systematic Caesarean section or induction is decided upon during these weeks. Thanks to this policy, the good results formerly obtained have been maintained and an important decrease in emergency Caesarean sections has been noted thus reducing the risks inherent in this method. However, a randomized trial is necessary to confirm these results.

Key words: Twin pregnancy, Labor induction, Caesarean section

Whether there is a preferential time for the occurrence of spontaneous or, if needed, induced labor, is of interest for several interrelated reasons :

1) The frequency of preterm births (before 37 weeks) has been notably reduced by preventive measures, as already indicated at the Aberdeen meeting where our preliminary data were presented. The present study confirms this effectiveness in maintaining the average rate of preterm labor, which is of 23% in our maternity hospital (Table 1). Striking results were obtained with patients who were regularly followed prenatally (three preterm births in a group of 34 patients as opposed to five preterm births for eight patients who were not followed) [4-6].

2) The second reason for discussing the optimal time for twin delivery is the increased fetal mortality and morbidity that occur after 39 weeks gestation. Our observations were confirmed by the extensive study by Bleker et al [1] involving 1655 pairs of twins. This study revealed that perinatal mortality of twins was less than that of singletons when birth occurred before 36 weeks, but was similar at 37 weeks and higher between 39 and 41 weeks of gestation, the increase being greater with nullipara than with parous women. These results were confirmed by Persson [8,9].

TABLE 1. Preterm Birth Rates in Twin Pregnancies: Evolution Since 1973

	Total twin pregnancies	Preterm birth	Rate (percent)
1973–1975	56	26	46
1976–1978	103	26	25
1979	42	8	19

3) Our 1980 study relates to the observations of Gruenwald [3] and Brown [2] showing that the frequency of intrauterine growth retardation for one or both twins increases progressively between 36 and 40 weeks gestation. This study was based on the children birth weight according to the norm established by Leroy and Lefort for the Parisian area [7] (Table 2). Birth between 37 and 38 weeks has the particular advantage of taking place after the risks of prematurity have passed and before the risk of growth retardation begins.

4) The frequency of emergency Caesarean section increases rapidly between 37 and 42 weeks gestation (Table 3).

5) Maternal tolerance of the heavy load of twin pregnancy is reduced and frequently overcome after 38 weeks gestation. The mother's blood pressure often rises and the risk of preeclamptic toxemia and eclampsia is thus increased.

These observations seemed sufficiently important to justify a change of policy. We decided, starting August 1978, to consider 38 weeks as the normal term and 39/40 weeks as being postterm for twin pregnancies.

The results of this modified policy were compared with those observed during the preceding 5-year period (1973–1978), during which systematic termination of pregnancy was not proposed: either labor occurred spontaneously, or Caesarean section was performed, or labor was induced in response to specific complications. Births thus occurred at different times between 39 and 42 weeks gestation. During the second period, systematic Caesarean sections accounted for 40% of the deliveries and induction was carried out in 44% of cases (Table 4). Spontaneous labor occurred in 16% of cases, at 37 or 38 weeks. The induction technique was an artificial rupture of the membranes with administration of epidural anaesthesia and oxytocin stimulation. The duration of labor after induction was not significantly different from that in spontaneous labor when epidural anaesthesia was used. This was true with both nulliparous and parous patients (Table 5). The rate of artificial extraction for cephalic (forceps, vacuum extraction) or breech (high extraction) presentations was not increased and no maternal morbidity appeared to be related to this new policy.

The first results showed that the total rate of Caesarean section was the same during both periods. The difference was in a drastic reduction of the number of emergency Caesarean sections performed during the second period (Table 6).

No important maternal complications were observed during the second period, whereas during the first period two women were transferred to the intensive care unit, one because of coagulation problems after abruptio placenta and the other because of septic shock.

There was no foetal or neonatal mortality or morbidity following the introduction of our new policy, whereas two neonatal deaths had occurred during the first period, one owing to abruptio placentae and the other to a prolapsed cord.

The rate of intensive care for newborn infants was somewhat lower during the second period: 4 cases out of 74 births (5%) compared with 19 cases out of 210 births (9%).

TABLE 2. Fetal Growth Retardation in Twin Pregnancies in 1973-1978

	Delivery before 38 weeks (percent)	Delivery after 38 weeks (percent)
F.G.R. of one twin	7.9	21
F.G.R. of both twins	4.2	14.5
Total	12.1	35.5

TABLE 3. Cesarean Section Emergency in Twin Delivery in Relation to Gestational Age, 1973-1978

	37-38 weeks		39-40 weeks		41-42 weeks	
	(N)	(%)	(N)	(%)	(N)	(%)
Spontaneous delivery	65	84	20	65	2	50
Cesarean section emergency	12	16	7	35	2	50
Total	77		27		4	

TABLE 4. Twin Delivery in Relation to Our Management Policy

	1973-1978		1978-1979	
	(N)	(%)	(N)	(%)
Twin pregnancies	105		37	
Spontaneous	63	60	6	16
Induction	23	22	16	44
Systematic Cesarean section	19	18	15	40

TABLE 5. Duration of Labor in Relation to Induction

		N	Duration of labor (minutes)
Multiparae	Spontaneous labor	26	227 ± 37
	Induction with epidural analgesia	5	248 ± 52
Nulliparae	Spontaneous labor	20	374 ± 148
	Induction with epidural analgesia	10	495 ± 221

TABLE 6. Frequency of Emergency Cesarean Section in Relation to Our Management Policy

	1973-1978		1978-1979	
	N	%	N	%
Normal birth	64	61	22	58
Emergency Cesarean section	22		1	
Systematic Cesarean section	19		15	
Total Cesarean section	41	39	16	42

No definitive conclusions can be drawn from the present study and we are aware that a comparison involving case histories is not an ideal method for establishing the value of a new policy.

It seems however that induction or Caesarean section at 37 or 38 weeks gestation in twin pregnancies might reduce the risks for both the mother and the foetus. We are ready to discuss a randomized trial involving joint studies by interested teams.

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