



## Relative Cervical Incompetence in Twin Pregnancy *Assessment and Efficacy of Cervical Suture*

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A total of 88 women with a twin pregnancy who had elective cervical suture were compared with 76 women with a twin pregnancy who had cervical assessment between the 13th and the 28th weeks of gestation but received no active treatment. The incidence of spontaneous onset of labour before 36 weeks was higher in the cervical suture group, and 53.4% of them sustained cervical damage.

**Key words:** Prematurity, Cervical incompetence, Twin pregnancy

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### INTRODUCTION

Spontaneous premature birth is the main reason for the high perinatal mortality in twin pregnancy [1, 5]. McKeown and Record [4] suggested that premature delivery in twins is probably the result of relative cervical incompetence due to overdistension of the uterus, but MacGillivray et al [3] pointed out that this hypothesis has not been clinically evaluated. The exact mechanism that causes premature uterine activity has not been fully explained. Relative cervical incompetence can occur in multiple pregnancy, but the question of whether this incompetence is the cause of preterm labour has yet to be answered.

The efficiency of cervical sutures in preventing premature delivery has been the subject of conflicting reports. Zakut et al [7] claimed that elective cervical suture significantly prolonged the duration of pregnancy. However, Weekes et al [6] could not confirm this. The above studies, however, lack a control group of patients who had cervical assessment without treatment. The present study compared the effect of elective cervical suture in twin pregnancies with a random control group matched for parity, gestational age, and social class, who had cervical assessment and received no treatment.

## PATIENTS AND METHODS

The obstetric records of 193 cases of multiple pregnancies occurring over the past 15 years in Aberdeen Maternity Hospital and St. Peter's Hospital, Chertsey, were reviewed. Twenty-nine cases were excluded from the final analysis because they developed preeclampsia, antepartum haemorrhage before 36 weeks' gestation, triplets, or higher multiple pregnancies. Seventy-eight cases had cervical suture inserted irrespective of cervical dilatation status by one team at St. Peter's Hospital. Ten more cases from Aberdeen Maternity Hospital were included in this group. These had a cervical suture inserted, not because of actual clinical cervical incompetence, but because of a previous history of recurrent abortions. In the total number of 88 patients, the cervical suture operation was carried out according to the procedure of McDonald [2] between the 13th and 28th weeks of pregnancy. The remaining 76 twin pregnancies were selected from Aberdeen Maternity Hospital to act as a control. They had a cervical assessment at least once between the 13th and 28th weeks of gestation but had no active treatment. Thirty-eight of the control group and 41 of the cervical suture group had had one or more viable pregnancies. The following scoring system was devised for this study:

Score A – cervix long and closed

Score B – cervix effaced or taken up and closed

Score C – cervix taken up or effaced and admitting one or more fingers

## RESULTS

Of the 76 control cases 7.89% delivered before the 36th week of pregnancy, compared with 27.27% of the 88 cases who had elective cervical suture. In this latter group 49 were found to have cervical damage of varying degree after delivery. Tables 1 and 2 show the distribution of cervical assessment according to obstetric history, with particular reference to viable pregnancies and/or abortions, the number of deliveries before 36 weeks, and the percentage of the total number of cases in each group.

From Tables 1 and 2 it can be seen that the percentage of preterm labour was higher in the elective suture group, irrespective of previous obstetric history; ie, they had no viable pregnancies. In the control group, however, relative cervical incompetence (Score C) before 28 weeks' gestation in patients who had had no viable pregnancies was not accompanied by an increased incidence of preterm labour. Table 3 compares the total number of deliveries before 36 weeks with A, B, and C cervical scores in each obstetric group and also shows a higher percentage of preterm labour in the patients who had elective suture.

## COMMENT

Our study does not support the claim that elective cervical suture prevents preterm delivery in multiple pregnancy [7]. The exact mechanism that caused preterm labour in this group was not fully explained. The incidence of preterm labour was not higher where relative cervical incompetence was diagnosed before 28 weeks' gestation and received no treatment. Therefore, it is our view that as this practice caused a very high percentage of cervical damage and did not prevent preterm labour, there is no justification for indiscriminate or elective cervical suture in the management of uncomplicated twin pregnancy.

TABLE 1. Distribution of Cervical Assessment According to First Pregnancy and Previous Pregnancy Outcome

Cervical Score	Previously one or more abortions and no viable pregnancy											
	First pregnancy			Suture								
	Control	Deliveries before 36th week	%	N	Deliveries before 36th week	%						
A	18	2	2.63	18	4	4.54	3	1	1.31	6	1	1.13
B	5	0	...	0	0	...	3	0	...	1	0	...
C	6	0	...	5	3	3.4	2	1	1.31	7	5	5.68



TABLE 3. Comparison of Total Number of Deliveries Before 36 Weeks With A, B, C Cervical Scores

Obstetric history	Total of A, B, and C score		Total number of deliveries before 36th week		%	
	Control	Suture	Control	Suture	Control	Suture
First pregnancy	29	23	2	7	6.89	30.43
Previously one or more abortions and no viable pregnancy	8	14	2	6	25.0	42.85
Previously one or more viable pregnancies and no abortions	38	41	2	8	5.26	19.51
Previously one or more viable pregnancies and one or more abortions following last viable pregnancy	1	10	0	3	...	30.0

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