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CLINICAL ARTICLE

Induction of labor on request in a resource-poor setting

C.O. Chigbu*, I.V. Ezeome, A.O. Okezie, B. Oyefara

Department of Obstetrics and Gynecology, University of Nigeria Teaching Hospital, Enugu, Nigeria

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Abstract

Objective: To determine the prevalence of and reasons for induction of labor on maternal request in a setting where aversion to induction of labor is the norm. *Method:* Women undergoing induction of labor on maternal request at three maternity centers in Enugu, Nigeria were interviewed by means of pre-tested self-administered questionnaires. The outcomes of labor in these women were also compared with those of a control group consisting of women who had induction of labor for medical reasons. *Results:* The prevalence of induction of labor on maternal request was 7.4%. Maternal convenience was the commonest reason for request induction. The outcomes of labor were similar between the subjects and their controls. *Conclusion:* Nigerian women are beginning to request induction of labor without medical indications and have comparable outcomes with those who have medical indications. There is need for appropriate regulatory guidelines.

1. Introduction

Induction of labor is indicated when the continuous intrauterine existence of the fetus poses a significant risk to maternal and/or fetal survival [1]. Induction of labor is not without risks; when medically indicated, however, the balance of risks is in favor of induction.

Worldwide, the rate of induction of labor has increased [2]. In the United States, the rate increased from 90 per 1000 live births in 1989 to 184 per 1000 live births in 1997 [3].

The concept of maternal rights to decisions on her mode of delivery has become well engraved in obstetric practice [4,5]. The ethical and legal issues arising therefrom have also received considerable attention [6,7].

Although induction of labor on request may not be unusual in developed countries [8,9], it is very much so in our setting.

In developing countries like Nigeria, it is very common for women to reject induction of labor, mainly due to fear of cesarean section in the event of failed induction. The situation seems to have taken a new turn in recent years with women demanding induction of labor without medical indication.

The present study investigates this unusual shift in maternal attitude.

2. Method

2.1. Setting

The study was carried out at the university of Nigeria teaching hospital, Aghaeze hospital and Christian Miracle Hospital, Enugu, Nigeria.

* Corresponding author.
E-mail address: chchigbu@yahoo.com (C.O. Chigbu).

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Table 1 General maternal characteristics

Characteristics	Study group	Control group	*P* value
	N = 36	*N* = 451	
Mean age	28.4 ± 3.2	27.6 ± 1.7	*P* > 0.05
University education	30 (83.3%)	172 (38.1%)	*P* < 0.05
Gestational age at induction	37.8 ± 0.6	36.7 ± 1.2	*P* > 0.05
Nulliparity	6 (16.7%)	91 (20.2%)	*P* > 0.05

Induction of labor is usually done with oxytocin (Haemex, London) infusion. Cervical ripening is done with intra-vaginal misoprostol (Cytotec; Searle, USA) or intra-cervical Foley catheter insertion. Management of failed induction is by cesarean delivery.

2.2. Study population

The study population comprised women who had induction of labor on request from July 2003 to June 2006.

2.3. Data collection

Women undergoing induction of labor were interviewed to ascertain the indication for the induction. Pre-tested self administered questionnaires were given to those that requested for induction.

Questions were asked on the respondent's personal data and reasons for requesting labor induction. Data on the outcome of labor and other relevant information were collected. The labor outcome measures assessed included Apgar scores, failed induction/cesarean rates, maternal and perinatal morbidity and mortality.

2.4. Data analysis

Content analysis was used to analyze the responses to the open-ended questions.

The maternal characteristics and outcome of induction of labor in the study group were compared with those of a control group. The control group consisted of women who had induction of labor for medical indications within the study period. These were women who had induction of labor on the advice of the Obstetrician.

Table 2 Maternal reasons for requesting induction of labor in 36 Nigerian women

Reason	Number	Percentages (%)
Maternal convenience	23	63.9
Tired of pregnancy	9	25.0
Birthday synchrony	2	5.6
Distance from hospital	2	5.6
Total	36	100

Table 3 Outcome of induction of labor

Outcome	Study group	Control group	*P* value
	N = 36	*N* = 451	
Apgar score <7 at 1 min	6 (16.7%)	81 (18.0%)	*P* > 0.05
Apgar score <7 at 5 min	0 (0.0%)	1 (0.22%)	*P* > 0.05
Failed induction	2 (5.6%)	29 (6.4%)	*P* > 0.05
Perinatal mortality	0 (0%)	0 (0%)	–
Maternal mortality	0 (0%)	0 (0%)	–
Maternal morbidity	0 (0%)	0 (0%)	–
Respiratory distress syndrome	0 (0%)	0 (0%)	–

Statistical comparison was done with Chi-square and *t*-test as appropriate at the 95% confidence level, with SPSS version 10.0.

2.5. Definitions

- Failed induction: women who failed to achieve vaginal delivery with induction of labor.
- Prolonged labor: labor lasting more than 16 hours from the commencement of induction [10].

3. Results

A total of 2983 deliveries were carried out during the study period. 487 (16.3%) inductions were done out of which 36 (7.4%) were for maternal request.

3.1. Age

The mean age was 28.4 ± 3.2 (range: 26–37) years for the study group and 27.6 ± 1.7 (range: 25–36) years for the control group. The difference was not significant.

3.2. Education

Thirty (83.3%) women in the study group and 172 (38.1%) in the control group had university education. The difference was significant.

3.3. Gestational age at induction

The mean gestational age at induction was 37.8 ± 0.6 (range: 37–39) weeks for the study group and 36.7 ± 1.2 (range: 34–41) weeks for the control group. The difference was not significant.

Table 4 Complications of induction of labor

Complication	Study group	Control group	*P* value
	N = 36	*N* = 451	
Fetal distress	1 (2.8%)	10 (2.2%)	*P* > 0.05
Hyper-stimulation	0 (0%)	0 (0%)	–
Prolonged labor	3 (8.3%)	31 (6.9%)	*P* > 0.05