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# The Practice of External Cephalic Version (ECV) and Vaginal Birth after Cesarean Section (VBAC) to reduce Cesarean Section rate in Thailand

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**ABSTRACT**

**Objective** To survey the practice of external cephalic version (ECV) and vaginal birth after cesarean section (VBAC) in Thailand.

**Design** Cross-sectional study.

**Setting** All general and private hospitals with more than 200 beds in Thailand.

**Subjects** Two hundred twenty seven hospitals (119 general hospitals, 9 university hospitals and 99 private hospitals).

**Intervention** The postal questionnaires were sent to all general and private hospitals with more than 200 beds during 1999. The questions asked whether the consultant obstetricians in these hospitals performed ECV and VBAC. If they practiced, how much their experiences were. If they had never done these procedures, had they ever seen or known about them.

**Main outcome measures** The number of the hospitals practicing ECV and VBAC.

**Results** Overall, 89% of questionnaires were returned. VBAC was performed in 33% of the hospitals but only 12% out of 33% were intentionally while ECV was perform in 26% of the hospitals.

**Conclusion** According to the survey, ECV and VBAC were performed on individual basis with only small number of cases. Although all obstetricians do not need to perform VBAC and ECV themselves, each hospital should provide these services for pregnant women who are considered appropriate for these procedures.

**Key words:** cesarean section, ECV, VBAC.

It is accepted worldwide that vaginal birth after cesarean section (VBAC) is a safe procedure when the cases are carefully selected.[1-3] It plays a major role in reducing cesarean section rate from having to repeat the operation. Trials from both developed and developing countries showed that it is safe whether in the tertiary center or in the community hospital.[2,4] However, even in the United States which strongly promote this practice, the number of women opting for trial of VBAC varied considerably (16.3%-90%).[5]

External cephalic version (ECV) is also proved to significantly reduce the incidence of breech delivery and cesarean section for breech presentation.[6] Although The Royal College of Obstetricians and

Gynaecologists of the United Kingdom stated in the management guidelines that "skilled service for external cephalic version should be available and offered", less than half (48%) of consultant obstetricians in the United Kingdom performed ECV.[7]

Thailand has a problem with the high cesarean rate which seems to be rising steadily. As a teaching hospital, we try to promote VBAC and ECV as the measures to reduce cesarean section.[8,9] However, many obstetricians are still very reluctant to perform these procedures. According to our previous report, 26% of the hospitals performed ECV and 12% of them intentionally practice VBAC.[10] We conducted this survey to evaluate the perception and practice of VBAC and ECV practice of the obstetricians in Thailand.

## Materials and Methods

The questionnaires were sent from Ramathibodi Hospital to all general hospitals and all private hospitals with more than 200 beds in Thailand with a return-post envelope during the year 1999. The questionnaire were anonymous and the questions asked were:

1. Do the obstetricians in your hospital perform ECV and/or VBAC?
2. If the answer to question 1 is "yes", how many cases per year were performed in your hospital?
3. If the answer to question 1 is "no", Have you ever known or seen these procedures? The return data were collected and analyzed.

## Results

Two hundred and four out of a total of 227 questionnaires were returned. The overall response rate was 89%. VBAC was performed in 33% of the hospitals, however, only 12% out of 33% were intentionally (table 1). All of the practices were on individual basis. Eighty-eight percent of the hospitals performing VBAC had less than 5% of vaginal deliveries from previous cesarean cases.

ECV was performed in 26% of the hospitals (table 1) at different gestational age. Five percent performed it at term, 10% during 34-36 gestational weeks, 8% during 28-32 gestational weeks and the rest did not have specific time to perform it. Ninety percent of the hospitals that performed ECV had experience of less than 20 cases. Most of the obstetricians saw ECV and VBAC when they were residents in the teaching hospitals.

**Table 1.** Perception and practice of ECV and VBAC

| | **ECV (%)**<br>**n= 204** | **VBAC (%)**<br>**n = 204** |
|---|---|---|
| Do not know the procedures | 3 (1.47%) | 2 (0.98%) |
| Know but do not perform | 99 (48.53%) | 34 (16.67%) |
| Have seen but do not perform | 48 (23.53%) | 100 (49.02%) |
| Perform | 54 (26.47%) | 68 (33.33%) |

## Discussion

The various measures have been proposed to reduce cesarean section rate which has become one of the most common operations nowadays. It causes the tremendous increase in health care cost compared to vaginal delivery without improving perinatal outcome and also increases maternal morbidity.[11,12] We chose to conduct this survey only in the general and private hospital with more than 200 beds because these hospitals supposed to have facility to perform cesarean section if VBAC or ECV resulted in complications needed urgent delivery.

Previous cesarean section is one of the most common indications for repeating the operation in the developing world. Although studies have shown that VBAC is safe and feasible both in tertiary center and community hospital[2,4] it is not accepted by many doctors especially those who never have experienced in conducting VBAC. When VBAC is successful, it associates with less morbidity than repeat cesarean section such as fewer blood transfusion, fewer postpartum infection, shorter hospital stay without increases perinatal morbidity.[1,2] The occurrence of uterine rupture is dependent on the type and location of previous incision. Uterine rupture is only 0.2-1.5% in case of low-transverse incision.[13]

Ramathibodi Hospital, as a teaching center, initiated VBAC program in 1994.8 We allow residents to look after these patients and make them familiar with the procedure and to be able to conduct VBAC after the completion of their training. Although 33% of the hospital perform VBAC from this survey, the practice is on individual basis. None of them did it on regular bases with proper hospital management guidelines, even though, almost 50% of the obstetricians in the hospitals have seen or experienced unintentionally VBAC. In the United States, VBAC is the accepted practice only recently after the soaring rate of repeated cesarean section and the cost. Unlike the United Kingdom, where all previous cesarean sections undergo screening for potential VBAC and only those who fail to meet the criteria have repeated cesarean section. Inadequate experience in VBAC is the reason for senior consultants who do not perform this procedure. This is because VBAC is quite new for Thailand. Junior consultants also do not have confidence enough to practice VBAC because only 3 out of 9 teaching hospitals have policy for VBAC according to our early report.10

Although ECV was undertaken in one-quarter of the hospitals from this survey, only small numbers of cases were performed and without added safety measures such as fetal heart rate monitoring and ultrasound. This procedure associated with a significant reduction in non-cephalic births (relative risk 0.42) and cesarean section (relative risk 0.52) without significant effect on perinatal mortality (relative risk 0.44).6

Although the incidence of serious complications associated with ECV is low, the potential is present. Fetal assessment before and after the procedure is recommended. It is also important to perform ECV only in the setting that cesarean delivery services are readily available.6 We started the ECV program in 19989 to train the residents to practice ECV in the proper way hoping that they can safely perform this procedure when they have completed their trainning program.

Finally, if VBAC and ECV are universally to be practiced in Thailand, how much impact could these procedures have on cesarean section. Based on 22% cesarean rate14 with 76% successful VBAC8, and with one million infants born each year in Thailand, over 150,000 fewer repeated cesarean deliveries can be achieved. Given an overall success rate of 66% for ECV9, and on the basis that 3% of all term pregnancies are breech, there will be approximately a reduction of 19,000 breech presentation which will give rise to fewer 13,000 cesarean sections per year assuming that 70% of successful ECV can deliver vaginally.[9] On this basis alone, it is of value to initiate these practices. Although all obstetricians do not need to perform VBAC and ECV, each hospital should provide these services for any pregnant woman who are considered appropriate for these procedures and for obstetricians who want to perform them. Lastly, the public should be educated about the safety and effectiveness of these procedures.

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