

Self-Preferred Route of Delivery of Thai Obstetricians and Gynecologists

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Background: The attitude of Obstetricians and Gynecologists (OB-GYNs) towards performing cesarean delivery on maternal request (CDMR) together with their preferred route of delivery for themselves or their wives is considered as important responsible factors of increasing cesarean delivery.

Objective: To assess the attitudes of Thai Obstetricians and Gynecologists with regard to their self-preferred route of delivery, willingness to perform cesarean delivery on maternal request, and associated factors.

Material and Method: From July 1, 2013 to September 30, 2013, a cross-sectional study was carried out of 1,950 members of The Royal Thai College of Obstetricians and Gynaecologists who were randomized before being sent mailed questionnaires. The questionnaires requested details of the OB-GYNs' demographic data and asked about their self-preferred route of delivery for themselves or their wives (in the case of male doctors) and their willingness to perform cesarean delivery on maternal request (CDMR). The questionnaires were returned via mail.

Results: Three hundred and seventy OB-GYNs (18.9%) completed and returned the questionnaires via mail. In a scenario of uncomplicated singleton cephalic presentation pregnancy at term, vaginal delivery was chosen as the most preferred route of delivery (68.9%). The significant associated factors for preferred cesarean delivery were male, age <40 years, experience in practice as OB-GYN <10 years and prior cesarean delivery. Many (53.2%) were willing to perform cesarean delivery on maternal request.

Conclusion: Most Thai Obstetricians and Gynecologists (68.9%) preferred vaginal delivery for themselves or their wives, but many (53.2%) were willing to perform cesarean delivery on maternal request.

Keywords: Cesarean delivery, Vaginal delivery, Preferred route of delivery, Thai Obstetricians and Gynecologists

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The number of cesarean deliveries is rising in Thailand from 21% in 1996 to 32% in 2007⁽¹⁾ similar to in other regions of the world^(2,3). Maternal request, a popular indication for cesarean delivery, is still not accepted by the International Federation of Gynecology and Obstetrics because of inadequate evidence to support a net benefit⁽⁴⁾. The attitude of Obstetricians and Gynecologists (OB-GYNs) towards performing cesarean delivery on maternal request (CDMR) together with their preferred route of delivery for themselves or their wives is considered as important responsible factors⁽⁵⁻⁹⁾.

Both attitudes have been previously surveyed

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in other regions of the world including the United Kingdom⁽⁵⁾, Belgium⁽⁶⁾, Denmark⁽⁷⁾, Singapore⁽⁸⁾ and South Korea⁽⁹⁾; however, no such information has been gathered from Thai OB-GYNs. The present study, therefore, was conducted to determine Thai OB-GYNs preferred route of delivery for themselves or their wives in uncomplicated singleton cephalic presentation pregnancy at term and to assess their willingness to perform CDMR without any other obstetric indications. Associated factors of both stances were also evaluated.

Material and Method

The protocol of this research was reviewed and approved by the ethics committee of Rajavithi Hospital (No. 72/2556).

After receiving the approval of the Hospital Ethics Committee, the authors obtained the names and addresses of all of the registered members (2,600 OB-GYNs) of the Royal Thai College of Obstetricians and

Gynaecologists (RTCOC). Sample size estimation was calculated using the formula⁽¹⁰⁾:

$$N = (Z \alpha/2)^2 \times P (1-P)/d^2$$

N = appropriate number of OB-GYNs

P = proportion of medical students who preferred cesarean delivery for themselves according to Watanabe T's study⁽¹¹⁾ = 0.4

Z alpha/2 = standard value from Table Z at confidence level = 1.96

alpha = 0.05

d = error of estimation at 5%

= 0.05

$$N = 1.96 \times 1.96 \times 0.4 \times (1-0.4)/0.05 \times 0.05$$

$$= 368.74 = 369 \text{ cases}$$

Other studies conducted by the RTCOC reported that twenty replied questionnaires (RQ) resulted from 100 sent questionnaires (SQ); in other words, the response rate was 20%. It was calculated, therefore, that 369 RQ should result from (100 x 369/20) 1,845 SQ.

About 5 percent of SQ (105) was added to the calculated number to allow for some possible errors such as incorrect name, hospital or address; hence, 1,950 SQ were randomly selected by computer from 2,600 OB-GYNs. Each SQ consisted of 2 major parts: A) Informed consent; and B) Research questionnaires divided into 4 parts as follows:

B₁ - Demographic data including gender, age, marital status, years of experience of practicing as OB-GYN

B₂ - Personal obstetric history, route of delivery of baby and satisfaction of previous delivery

B₃ - Preferred route of delivery and reasons for choosing that route

B₄ - Willingness to perform CDMR

Both major parts were sent to the selected OB-GYNs via mail and they were asked to return them separately in order to blind the participants from the researchers so that they could answer the questionnaires anonymously. Postage for sending back both major parts was pre-paid by the researchers.

All data were analyzed using SPSS version 16 (SPSS Inc., Chicago, IL). Arithmetic mean, mode and median were used for descriptive data. Comparison between groups was analyzed using Student t-test, Mann-Whitney U test, Chi-square test, the level of statistical significance was set at $p < 0.05$.

Results

From July 1, 2013 to September 30, 2013, 370 of 1,950 Thai OB-GYNs completed and returned the

questionnaires and informed consent via mail. This represented a response rate of 18.9%.

Demographic characteristics of the respondents are shown in Table 1. Most subjects were married (74.0%), Buddhist (96.2%), Diplomate Board of Obstetrics and Gynecology (75.1%), and working in Bangkok (35.4%). Median gravidity, parity and abortion were 2, 2, and 1, respectively. Prior vaginal, forceps/vacuum extraction and cesarean delivery were 82 (22.2%), 55 (14.9%), and 141 (38.1%), respectively. CDMR accounted for seventeen percent of indications for primary cesarean delivery, while cephalopelvic disproportion (CPD) was the most common indication at 37.6%.

Self-preferred route of delivery of respondents or their wives together with reasons are shown in Table 2. Vaginal (68.9%) rather than cesarean delivery (24.1%) was preferred (7.0% of respondents did not answer this question). The belief that vaginal delivery is the natural method of delivery in terms of a natural experience was the main reason given (37.6%) for vaginal delivery, and safety for both mother and baby (34.9%) was the most common reason for choosing the cesarean method.

Table 3 shows the relationship between associated variables and respondents' preferred route of delivery for themselves or their wives. The significant associated factors for preferred cesarean delivery were male, age < 40 years, experience in practice as OB-GYN ≤ 10 years and prior cesarean delivery.

There were more respondents who were willing to perform CDMR (197/370; 53.2%) than there were (161/370; 43.5%) who were against using it. Twelve of the 370 subjects did not state their opinions. The significant variables for willingness to perform CDMR were age < 40 years, working in private hospitals, and experience in practice as OB-GYN ≤ 10 years (Table 4).

Discussion

All previous studies around the world regarding OB-GYNs' preferred route of delivery for themselves or their wives have revealed that vaginal delivery is their most commonly preferred mode of delivery, varying from 56.6% to 98.8%^(6,7,11-13).

Thai OB-GYNs' attitudes were similar to those of other foreign OB-GYNs⁽¹⁰⁾. Examining the reasons of the group who preferred vaginal delivery, the belief that this method is the natural way of giving birth was the most common reason stated (37.6%) similar to the view reported of United Kingdom (UK) OB-GYNs (46%)⁽⁵⁾. Most OB-GYNs around the world believe that

Table 1. Socio-demographic characteristics of the respondents (n = 370)

Characteristics	n (%)
Gender	
Male	153 (41.4)
Female	217 (58.6)
Age (years)	
<40	109 (29.5)
≥40	261 (70.5)
Mean ± SD	47.85±11.72
Median (min-max)	47.5 (29-85)
Marital status	
Single	85 (23.0)
Married	274 (74.0)
Separated/widowed/divorced	11 (3.0)
Hometown	
Northern	56 (15.1)
Northeastern	55 (14.4)
Central	203 (54.4)
Bangkok	133 (35.4)
Outside Bangkok	70 (19.0)
Southern	56 (15.1)
Religion	
Buddhist	356 (96.2)
Christian	12 (3.2)
Islamic	2 (0.6)
Educational level	
Diplomate board of OB-GYN	278 (75.1)
Diplomate sub-board of OB-GYN	92 (24.9)
Workplace	
Super-tertiary/medical school	138 (37.3)
Tertiary/provincial hospital	55 (14.9)
Secondary/district hospital	34 (9.2)
Private clinic/private hospital	111 (30.0)
Other	32 (8.6)
Years in practice as OB-GYN (years)	
≤10	127 (34.4)
>10	243 (65.6)
Mean ± SD	17.51±11.00
Median (min-max)	16 (1-53)
Monthly family income (baht/month)	
<50,000	41 (11.1)
50,000-100,000	204 (55.1)
>100,000	95 (25.7)
Other	30 (8.1)
Median (min-max)	100,000 (10,000-1,200,000)
Previous history of delivery	132 (35.7%)

Exchange rate 30 Baht = 1 USD

vaginal delivery is the best, most appropriate, and most natural birth route for themselves or their wives.

Eleven participants (12.4%) chose cesarean

Table 2. Distribution of preferred mode of delivery of the respondents or their wives classified by their reasons

	n (%)
Preferred mode of delivery (n = 370)	
Vaginal delivery	255 (68.9)
Cesarean delivery	89 (24.1)
Not stated	26 (7.0)
Reasons for vaginal delivery (n = 255)	
Safety for both mother and baby	88 (34.5)
Belief that vaginal delivery is the natural method of delivery	96 (37.6)
No indication for cesarean delivery	28 (11.0)
Quicker postpartum recovery	26 (10.2)
Fear of cesarean scar	1 (0.4)
Fear of cesarean delivery	2 (0.8)
Not stated	14 (5.5)
Reasons for cesarean delivery (n = 89)	
Safety for both mother and baby	31 (34.9)
Ability to choose the time of birth	29 (32.5)
Fear of pain from vaginal delivery	17 (19.1)
Fear of episiotomy	1 (1.1)
Misunderstand the questions	11 (12.4)
Willing to perform cesarean delivery on maternal request (n = 370)	
Yes	197 (53.3)
No	161 (43.5)
Not stated	12 (3.2)

delivery as their preferred route of delivery because they had misunderstood the questions. They thought that the researchers were asking what their preferred route of delivery was for their previous real situations while the researchers actually wanted to know their preferred route of delivery in an ideal situation in the future: namely, singleton 39 weeks of gestational age with no medical or obstetric complications. For example, some answers about reason of cesarean delivery of participants who chose cesarean delivery as their preferred mode of delivery were breech presentation, previous cesarean delivery. This misunderstanding could be the result of a limitation in the methodology of the study (SQ). The respondents answered the question in the questionnaire in the way that they themselves interpreted it from this one-way communication. It should be noted, however, that the researchers had supplied a mobile phone number in the informed consents, which participants could call in the event that they found the questions to be equivocal.

CDMR was the second most common

Table 3. Relationship between the variables and the respondents' preferred mode of delivery for themselves or their wives

Variables	Vaginal delivery (n = 255) n (%)	Cesarean delivery (n = 89) n (%)	p-value
Gender			0.009*
Male	97 (38.0)	48 (53.9)	
Female	158 (62.0)	41 (46.1)	
Age (years)			0.015*
< 40	68 (26.7)	36 (40.4)	
≥ 40	187 (73.3)	53 (59.6)	
Mean ± SD	49.18±12.12	43.67±10.4	<0.001*
Marital status			0.858
Single	60 (23.5)	25 (28.1)	
Married	187 (73.3)	62 (69.7)	
Separated/widowed/divorced	8 (3.2)	2 (2.2)	
Years in practice as OB-GYN (years)			<0.001*
≤10	77 (30.2)	46 (51.7)	
>10	178 (69.8)	43 (48.3)	
Median (min-max)	18 (1-53)	10 (1-40)	<0.001*
Parity			0.058
0	87 (34.1)	43 (48.3)	
1	34 (13.3)	10 (11.3)	
≥ 2	134 (52.6)	36 (40.4)	
Prior vaginal delivery	44 (17.3)	1 (1.1)	<0.001*
Prior cesarean delivery	67 (26.3)	38 (42.7)	<0.001*
Work place			0.826
Public hospital	77 (30.2)	63 (70.7)	
Private hospital	178 (69.8)	26 (29.3)	

* Significant at $p < 0.05$

indication for prior cesarean delivery (17.0%) for the participants or their wives who had undergone cesarean delivery, while cephalopelvic disproportion was the most common indication (37.6%)

Some associated factors for preferred cesarean delivery in the present study were dissimilar to those of other foreign studies. For example, Thai male OB-GYNs were significantly more in favour of cesarean delivery than Thai female OB-GYNs ($p = 0.009$) whereas there was no significant difference between gender in a comparable Swedish study in the scenario of "normal pregnancy at term" ($p = 0.512$)⁽¹⁴⁾. Different race and culture were supposed to be the cause of this different feature. In Thailand, males usually have more dominant role than females in the family. So Thai OB-GYNs' acceptance of CDMR (53.2%) was rather higher than that of other foreign OB-GYNs^(6,7,11,14) with the exception of Scottish OB-GYNs⁽¹⁵⁾, who expressed the highest percentage of acceptance for CDMR (54.0%). While the older OB-GYNs (≥40 years) and those with longer working experience (>10 years) had a more positive

attitude towards providing CDMR in the Swedish study⁽¹⁴⁾, the present study revealed the opposite results: that younger OB-GYNs (<40 years) and those with shorter (≤10 years) working experience had more positive attitudes towards performing CDMR. Different race and culture were also supposed to be the cause of this different feature. In addition, there is a midwifery system in modern obstetrical practice in Scandinavian countries, including Sweden, but absent in Thailand nowadays.

It is interesting that while 69.5% of participants thought that vaginal delivery was the most appropriate method for themselves or their wives, (52.7%) of participants were willing to perform CDMR.

A limitation of the present study was that only 18.9% of the total Thai OB-GYNs completed and returned the questionnaires; furthermore, as previously discussed, one-way communication may have been the cause of some of the questions' being misunderstood. The present study also had many strengths such as:

A) Systematic computerized randomization

Table 4. Relationship between the variables and the respondents' willingness to perform cesarean delivery on maternal request (CDMR)

Variables	Say yes for CDMR (n = 197) n (%)	Say no for CDMR (n = 161) n (%)	p-value
Gender			0.584
Male	80 (40.6)	70 (43.5)	
Female	117 (59.4)	91 (56.5)	
Age (years)			0.006 ^a
<40	72 (35.5)	37 (23.0)	
≥40	125 (36.5)	124 (77.0)	
Mean ± SD	45.32±9.99	50.15±12.69	<0.001 ^b
Marital status			0.498
Single	48 (24.4)	35 (21.7)	
Married	142 (72.0)	123 (76.4)	
Separated/widow/divorced	7 (3.6)	3 (1.9)	
Years in practice as OB-GYN (years)			0.018 ^a
≤10	80 (40.6)	46 (28.6)	
>10	117 (59.4)	115 (71.4)	
Median (min-max)	14 (1-53)	18 (1-49)	0.001 ^c
Parity			0.674
0	74 (37.6)	54 (33.5)	
1	26 (13.2)	25 (15.5)	
≥2	97 (49.2)	82 (51.0)	
Prior vaginal delivery	22 (11.2)	24 (14.9)	0.351
Prior cesarean delivery	72 (36.5)	50 (31.1)	0.099
Workplace			<0.001 ^a
Public hospital	122 (61.9)	130 (80.7)	
Private hospital	75 (38.1)	31 (19.3)	

^a = significant difference determined by Chi-square test

^b = significant difference determined by Independent t-test

^c = significant difference determined by Mann-Whitney U test

was used so that there was less bias in the study.

B) Even though there was a very low response rate (18.9%), the total numbers of respondents (370 cases) was enough by calculation beforehand.

Conclusion

In a scenario of uncomplicated singleton cephalic presentation pregnancy at term, most Thai Obstetricians and Gynecologists (68.9%) preferred vaginal delivery for themselves or their wives, but many (53.2%) were quite willing to perform cesarean delivery on maternal request.

What is already known on this topic ?

The attitude of Obstetricians and Gynecologists (OB-GYNs) towards performing cesarean delivery on maternal request (CDMR) together with their preferred route of delivery for themselves or

their wives, have been previously surveyed in other regions of the world including the United Kingdom⁽⁵⁾, Belgium⁽⁴⁾, Denmark⁽⁷⁾, Singapore⁽⁸⁾ and South Korea⁽⁹⁾; however, no such information has been gathered in Thai OB-GYNs. To the best of our knowledge, the present study was the first study in Thailand about the attitude of both stances.

What this study adds ?

All previous studies around the world regarding OB-GYNs' preferred route of delivery for themselves or their wives have revealed that vaginal delivery is their most commonly preferred mode of delivery, varying from 56.6% to 98.8%. Thai OB-GYNs' attitudes were similar to those of other foreign OB-GYNs. Most Thai Obstetricians and Gynecologists (68.9%) preferred vaginal delivery for themselves or their wives, but many (53.3%) were quite willing to

perform cesarean delivery on maternal request.

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Potential conflicts of Interest

None.

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วิธีการคลอดที่พึงปรารถนาของสูติรีแพทย์ไทย

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ภูมิหลัง:ทัศนคติของสูติรีแพทย์ต่อการยอมรับการผ่าท้องทำคลอดตามคำร้องขอของมารดา และวิธีการคลอดที่พึงปรารถนาของตนเองหรือภรรยาเป็นปัจจัยสำคัญต่ออัตราผ่าท้องทำคลอดที่เพิ่มขึ้น

วัตถุประสงค์: เพื่อประเมินทัศนคติของสูติรีแพทย์ไทยต่อวิธีการคลอดที่พึงปรารถนาของตนเองหรือภรรยา (กรณีผู้ตอบเป็นชาย) การยอมรับการผ่าท้องทำคลอดตามคำร้องขอของมารดาและปัจจัยที่เกี่ยวข้องกับทัศนคติทั้ง 2 ข้อ

วัสดุและวิธีการ: การศึกษาเชิงสำรวจแนวตัดขวาง โดยการสุ่มแบบสอบถามในรูปจดหมายไปยังสูติรีแพทย์ที่เป็นสมาชิกราชวิทยาลัยสูติรีแพทย์แห่งประเทศไทย จำนวน 1,950 คน ตั้งแต่วันที่ 1 กรกฎาคม พ.ศ. 2556 ถึง 30 กันยายน พ.ศ. 2556 โดยสอบถามลักษณะประชากรศาสตร์ วิธีการคลอดที่พึงปรารถนาของตนเองหรือภรรยา (กรณีผู้ตอบเป็นชาย) และการยอมรับการผ่าท้องทำคลอดตามคำร้องขอของมารดาโดยให้ตอบกลับทางจดหมาย

ผลการศึกษา: สูติรีแพทย์จำนวน 370 คน ตอบกลับแบบสอบถาม คิดเป็นร้อยละ 18.9 พบว่า 255 คน (68.9%) เลือกคลอดทางช่องคลอด ในสถานการณ์ของแม่ที่ครรภ์เดียว ทารกมีศีรษะเป็นส่วนนำและไม่มีภาวะแทรกซ้อน ปัจจัยที่มีผลต่อการเลือกคลอดโดยผ่าท้องทำคลอดของตนเอง ได้แก่ สูติรีแพทย์ชาย, อายุน้อยกว่า 40 ปี, ประสบการณ์การทำงานในฐานะสูติรีแพทย์น้อยกว่า 10 ปีและเคยผ่าท้องทำคลอดมาก่อนในขณะเดียวกันร้อยละ 53.2 ยอมรับ การผ่าท้องทำคลอดตามคำร้องขอของมารดา

สรุป: สูติรีแพทย์ไทยร้อยละ 68.9 เลือกคลอดทางช่องคลอดเป็นวิธีการคลอดที่พึงปรารถนาให้กับตนเองหรือภรรยาในขณะที่ยอมรับการผ่าท้องทำคลอดตามคำร้องขอของมารดา
