

Preferred Route of Delivery of Thai Pregnant Women

Ekachai Kovavisarach MD^{*,**},
Wipawan Sukontaman MD^{*}

^{*} Department of Obstetrics and Gynecology, Rajavithi Hospital, Bangkok, Thailand

^{**} College of Medicine, Rangsit University, Bangkok, Thailand

Background: Pregnant women who prefer cesarean delivery may request it without any obstetric indication, and this could be one of the reasons for the high rates of cesarean deliveries.

Objective: To determine the route of delivery preferred by Thai pregnant women.

Material and Method: A cross-sectional study was performed of Thai pregnant women who attended the antenatal care (ANC) clinic in Rajavithi Hospital between February 1, 2011 and July 31, 2011. Participants were interviewed by one of the researchers using questionnaires relating to their preferred route of delivery assuming they were in the scenario of term pregnancy with uncomplicated singleton cephalic presentation.

Results: Most cases (418/440, 95%) preferred vaginal delivery. The most common reason given for choosing vaginal delivery was faster recovery (49.8%) while the main motivation stated for cesarean delivery was fear of pain during vaginal delivery (68.2%). Dissatisfaction with previous birth experience was the only factor significantly associated with preference for cesarean delivery ($p < 0.05$).

Conclusion: Most Thai pregnant women (95%) attending the ANC clinic at Rajavithi Hospital preferred vaginal delivery. Dissatisfaction with previous birth experience was the only factor significantly associated with choice of the cesarean route.

Keywords: Cesarean delivery, Vaginal delivery, Preferred route of delivery, Thai pregnant women

J Med Assoc Thai 2017; 100 (Suppl. 1): S131-S135

Full text. e-Journal: <http://www.jmatonline.com>

Nowadays, the trend of the cesarean route in Thailand is an upward one, having grown from 21% in 1996 to 32% in 2007⁽¹⁾. Rajavithi Hospital likewise saw an increase from 25.5% in 2002 to 34.7 in 2011⁽²⁾. Only a minority of pregnant women around the world prefer cesarean delivery⁽³⁻⁸⁾, and the only study previously performed in Thailand reported that 12.5% of pregnant women opted for the cesarean method⁽⁶⁾.

Many factors are associated with women's preference for cesarean delivery such as maternal age, education, ethnicity, previous dissatisfaction with birth experience, fear of giving birth, and previous cesarean delivery^(3,4,6). Women who prefer cesarean delivery may request it without any obstetric indication, and cesarean delivery on maternal request is thought to be one of the reasons for the high rate of cesarean births⁽⁴⁾.

The present study was therefore designed to determine Thai women's preferred route of delivery in uncomplicated singleton cephalic presentation pregnancy at term, and factors associated with their

preference.

Material and Method

The protocol of this study was reviewed and approved by the ethics committee of Rajavithi Hospital (No. 21/2554). The sample size was calculated using the formula⁽⁹⁾.

$$n = \frac{Z_{\alpha/2}^2 p(1-p)}{d^2}$$

n = appropriate number of pregnant women; p = proportion of people who prefer cesarean delivery according to Koken G's study⁽¹⁰⁾ = 0.3; $Z_{\alpha/2}$ = standard value from Table Z at confidence level = 1.96; Alpha = 0.05; and d = error of estimation at 5%.

Therefore, $n = 1.96 \times 1.96 \times 0.3(1-0.3) / 0.05 \times 0.05 = 322.69 = 323$ cases.

About 107 cases (30%) were added to compensate for contingencies such as missing data, so the total number was $323 + 107 = 430$ cases.

Thai pregnant women attending the antenatal case (ANC) clinic in Rajavithi Hospital for the first time between February 1, 2011 and July 31, 2011 were recruited if they met the following criteria: Thai race, singleton, aged between 18-34 years, gestational age ≥ 28 weeks. The exclusion criteria were those who had

Correspondence to:

Kovavisarach E, Department of Obstetrics and Gynecology, Rajavithi Hospital, 2 Phayathai Road, Rajathewi, Bangkok 10400, Thailand.

Phone: +66-2-3548165 ext. 3226, Fax: +66-2-3548084

E-mail: kekachai1@gmail.com

any medical or obstetric complication or previous cesarean delivery.

Participants were interviewed by one of the researchers using questionnaires with open questions relating to demographic data (such as age, education level, occupation, gestational age and income), preferred route of delivery and reason for their preference, and previous birth experience in cases of multigravidity. They were asked to answer assuming they were in the scenario of term pregnancy with uncomplicated singleton cephalic presentation.

The questionnaires were tested for reliability and validity by three experts from the Department of Epidemiology, Faculty of Public Health, Mahidol University, Bangkok.

The data were collected and analyzed using SPSS version 17 (SPSS Inc., Chicago, IL). Chi-square test and Student t-test were used to compare the results received from the group that stated a preference for the vaginal route with those of the group that said that they would choose cesarean delivery. The level of statistical significance was set at $p < 0.05$.

Results

During the study period, 440 Thai pregnant women were interviewed and most participants preferred vaginal to cesarean delivery [418 cases (95.0%) and 22 cases (5.0%) respectively]. Demographic data such as maternal age, marital status, education level, occupation, parity, income and gestational age are shown in Table 1. There were no significant differences in any data between the two (vaginal and cesarean delivery preference) groups.

The most common reason for choosing vaginal delivery (208 cases, 49.8%) was faster recovery (Table 2). Fear of pain during vaginal delivery was the most common reason (15 cases, 68.2%) for choice of cesarean delivery (Table 3).

With regard to the issue of previous birth experiences, dissatisfaction was significantly higher in the cesarean delivery preference group than in the vaginal delivery preference group [4/19; (21.1%): 20/169; (11.9%) $p < 0.05$].

Discussion

The rate of choice of cesarean delivery in the present research (5.0%) was quite similar to the findings of many previous studies which found rates varying from 2.8% to 8.2%^(3,5-8,11,12). Previous Thai⁽⁶⁾ and Turkish⁽¹⁰⁾ studies reported substantially higher levels of preference for cesarean delivery at 12.5% and 13.2-

19.1% respectively.

In a previous similar Thai study by Yamasmit and Chaithongwongwatthana⁽⁶⁾ in Vajira Hospital, Bangkok Thailand in 2012, which found a higher prevalence of preference for cesarean delivery (12.5%), the authors found that rates could vary even in the same ethnic population and same study period.

The most common reason for preferred vaginal delivery in previous studies^(5,6,12,13) was desire for a natural process, while it was the second most common reason in the present study (26.8%), in which the most often-stated reason was faster recovery (49.8%).

The most common reason for preferring cesarean delivery in the present study (fear of labor pain) was similar to findings of two other studies performed in Thailand⁽⁶⁾ and Singapore⁽⁵⁾. Childbirth education should be offered to pregnant mothers because labor pain is physiologic pain, and there are many non-pharmacological as well as pharmacological methods of relieving labor pain⁽¹⁴⁾.

Preferred route of delivery may change with different gestational ages⁽⁸⁾, and so we decided to interview participants in their third trimester. Dissatisfaction with previous birth experience was the only significant factor associated with choosing cesarean delivery, and this was similar to the findings of a Brazilian study⁽¹⁵⁾.

Conclusion

Most Thai pregnant women (95.0%) attending the ANC clinic at Rajavithi Hospital preferred vaginal delivery. Dissatisfaction with previous birth experience was the only factor significantly associated with preference for cesarean delivery.

What is already known on this topic?

Vaginal delivery is the preferred route of delivery of pregnant women in most countries around the world. There had only been one Thai study of this topic prior to the present one.

What this study adds?

Thai pregnant women also prefer vaginal delivery (95.0%) and dissatisfaction with previous birth experience was the only factor significantly associated with cesarean delivery.

Acknowledgements

The authors wish to thank Assistant Professor Kasem Saereeporncharoenkul, Head of the

Table 1. Demographic data of Thai pregnant women

	Total (n = 440) (%)	Vaginal delivery (n = 418) (%)	Cesarean delivery (n = 22) (%)	p-value
Age (years)				0.186
Mean \pm SD	26.45 \pm 4.85	26.38 \pm 4.83	27.77 \pm 5.25	
Status				0.464
Married	428 (97.3)	407 (97.4)	21 (95.5)	
Separated/widowed/divorced	12 (2.7)	11 (2.6)	1 (4.5)	
Education				0.502
Primary school	49 (11.1)	46 (11.0)	3 (13.6)	
High school	180 (40.9)	174 (41.6)	6 (27.3)	
Technical school	84 (19.1)	80 (19.1)	4 (18.2)	
Bachelor degree or higher	127 (28.9)	118 (28.2)	9 (40.9)	
Occupation				0.326
Government officer	24 (5.5)	22 (5.3)	2 (9.1)	
Manager & administrator	57 (13.0)	52 (12.4)	5 (22.7)	
Clerical/sales & service	201 (45.7)	195 (46.7)	6 (27.3)	
Student	9 (2.0)	9 (2.2)	0 (0.0)	
Unemployed	56 (12.7)	52 (12.4)	4 (18.2)	
Health care provider	5 (1.1)	4 (1.0)	1 (4.5)	
Freelance	14 (3.2)	14 (3.3)	0 (0.0)	
House keeper	60 (13.6)	56 (13.4)	4 (18.2)	
Other	14 (3.2)	14 (3.3)	0 (0.0)	
Income (baht per month)				0.173
<15,000	160 (36.4)	155 (37.1)	5 (22.7)	
\geq 15,000	280 (63.6)	263 (62.9)	17 (77.3)	
				0.275
<10,000	89 (20.2)	87 (20.8)	2 (13.6)	
\geq 10,000	351 (79.8)	331 (79.2)	20 (86.4)	
Gestational age (weeks)				0.236
Mean \pm SD	33.48 \pm 3.25	33.43 \pm 3.25	34.43 \pm 3.28	
Parity				0.850
0	262 (59.5)	249 (59.6)	13 (59.1)	
1	127 (28.9)	121 (28.9)	6 (27.3)	
2	43 (9.8)	40 (9.6)	3 (13.6)	
>2	8 (1.8)	8 (1.9)	0 (0.0)	

Table 2. Reasons for preferring vaginal delivery

Reasons	Preferred vaginal delivery (n = 418)	
	n	%
Faster recovery	208	49.8
Natural/wanted experience	112	26.8
Cheaper	32	7.7
Fear of cesarean delivery	35	8.4
Bonding between mother and baby	15	3.6
Safety	13	3.1
Need more children	1	0.2
Doctor's recommendation	1	0.2
Friend's recommendation	1	0.2

Table 3. Reasons for preferring cesarean delivery

Reasons	Preferred cesarean delivery (n = 22)	
	n	%
Fear of pain during vaginal delivery	15	68.2
Safety	3	13.6
Doctor's recommendation	2	9.1
Convenience for parturients	2	9.1

Department of Obstetrics and Gynecology, Rajavithi Hospital for permission to report this study and Rajavithi Hospital for the funding it provided.

Potential conflicts of interest

None.

References

- Lumbiganon P, Laopaiboon M, Gulmezoglu AM, Souza JP, Taneepanichskul S, Ruyan P, et al. Method of delivery and pregnancy outcomes in Asia: the WHO global survey on maternal and perinatal health 2007-08. *Lancet* 2010; 375: 490-9.
- Wachiratarapadorn N, Kovavisarach E. Trend in mode of delivery in Rajavithi Hospital: a ten-year analysis (2002-2011). *J Med Assoc Thai* 2013; 96: 768-72.
- Hildingsson I, Radestad I, Rubertsson C, Waldenstrom U. Few women wish to be delivered by caesarean section. *BJOG* 2002; 109: 618-23.
- Gamble JA, Creedy DK. Women's preference for a cesarean section: incidence and associated factors. *Birth* 2001; 28: 101-10.
- Chong ES, Mongelli M. Attitudes of Singapore women toward cesarean and vaginal deliveries. *Int J Gynaecol Obstet* 2003; 80: 189-94.
- Yamasmit W, Chaithongwongwatthana S. Attitude and preference of Thai pregnant women towards mode of delivery. *J Med Assoc Thai* 2012; 95: 619-24.
- Graham WJ, Hundley V, McCheyne AL, Hall MH, Gurney E, Milne J. An investigation of women's involvement in the decision to deliver by caesarean section. *Br J Obstet Gynaecol* 1999; 106: 213-20.
- Tranquilli AL, Garzetti GG. A new ethical and clinical dilemma in obstetric practice: cesarean section "on maternal request". *Am J Obstet Gynecol* 1997; 177: 245-6.
- Lameshow S, Hosmer DW Jr, Klar J, Lwanga SK. The one-sample problem. In: Lameshow S, Hosmer DW Jr, Klar J, Lwanga SK, editors. *Adequacy of sample size in health studies*. Chichester: John Wiley and Sons; 1990: 1-8.
- Koken G, Cosar E, Sahin FK, Tolga AD, Duman Z, Aral I. Attitudes towards mode of delivery and cesarean on demand in Turkey. *Int J Gynaecol Obstet* 2007; 99: 233-5.
- Thomas J, Paranjothy S. Royal College of Obstetricians and Gynaecologists. *Clinical effective support unit. National sentinel caesarean section audit report*. London: RCOG Press, 2001.
- Lee SI, Khang YH, Lee MS. Women's attitudes toward mode of delivery in South Korea—a society with high cesarean section rates. *Birth* 2004; 31: 108-16.
- Pevzner L, Goffman D, Freda MC, Dayal AK. Patients' attitudes associated with cesarean delivery on maternal request in an urban population. *Am J Obstet Gynecol* 2008; 198: e35-7.
- Kovavisarach E. Natural birth. *Thai J Obstet Gynaecol* 2012; 20: 87-94.
- Potter JE, Berquo E, Perpetuo IH, Leal OF, Hopkins K, Souza MR, et al. Unwanted caesarean sections among public and private patients in Brazil: prospective study. *BMJ* 2001; 323: 1155-8.

วิธีการคลอดที่พึงปรารถนาของหญิงตั้งครรภ์ไทย

เอกชัย ไคววารินทร์, ภาววรรณ สุนทรมาน

ภูมิหลัง: หญิงตั้งครรภ์ที่พึงพอใจการผ่าตัดทำคลอด อาจขอให้สูติแพทย์ผ่าท้องทำคลอดให้โดยไม่มีข้อบ่งชี้ทางสูติกรรม การผ่าท้องทำคลอดโดยหญิงตั้งครรภ์อาจเป็นสาเหตุหนึ่งของอัตราการผ่าท้องทำคลอดที่สูงขึ้น

วัตถุประสงค์: หาความชุกของวิธีคลอดที่หญิงตั้งครรภ์ไทยพึงปรารถนา

วัตถุประสงค์และวิธีการ: การวิจัยแบบภาคตัดขวางที่กระทำในหญิงตั้งครรภ์ที่มาตรวจที่คลินิกฝากครรภ์ โรงพยาบาลราชวิถีระหว่างวันที่ 1 กุมภาพันธ์ พ.ศ. 2554 ถึงวันที่ 31 กรกฎาคม พ.ศ. 2554 โดยหนึ่งในผู้วิจัยสัมภาษณ์ผู้เข้าร่วมวิจัย โดยสมมติสถานการณ์ว่าผู้ตอบกำลังตั้งครรภ์เดี่ยวครบกำหนดและทารกมีศีรษะเป็นส่วนนำและไม่มีภาวะแทรกซ้อนจะพึงพอใจวิธีการคลอดวิธีใดมากที่สุด

ผลการศึกษา: ผู้เข้าร่วมวิจัยส่วนมากพอใจที่จะคลอดทางช่องคลอด (ร้อยละ 95) โดยเหตุผลที่มากที่สุดในการเลือกคลอดทางช่องคลอด คือ ฟื้นตัวได้เร็ว (ร้อยละ 49.8) ในขณะที่เหตุผลที่มากที่สุดในการเลือกผ่าท้องทำคลอด คือ กลัวเจ็บขณะคลอด (ร้อยละ 68.2) ประสิทธิภาพที่ไม่พึงพอใจจากการคลอดครั้งก่อนเป็นปัจจัยที่สัมพันธ์กับกลุ่มที่พึงปรารถนาเลือกผ่าท้องทำคลอดอย่างมีนัยสำคัญทางสถิติ ($p < 0.05$)

สรุป: ผู้ตั้งครรภ์ไทยที่ฝากครรภ์ที่โรงพยาบาลราชวิถีส่วนมากพึงปรารถนาการคลอดทางช่องคลอด (ร้อยละ 95) ประสิทธิภาพที่ไม่พึงพอใจจากการคลอดครั้งก่อนเป็นปัจจัยที่สัมพันธ์กับกลุ่มที่พึงพอใจเลือกผ่าท้องทำคลอดอย่างมีนัยสำคัญทางสถิติ
