

## An epidemiological study of hydatidiform moles conducted in Chulalongkorn Hospital

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*The results of a 10-year descriptive study on the epidemiology of hydatidiform moles (HM) at the Department of Obstetrics and Gynecology, Faculty of Medicine, Chulalongkorn Hospital is hereby presented. We reviewed the medical records of all patients and used descriptive statistics to present our results.*

*We found that the incidence of HM was 1:450 deliveries. The patients' age ranges were: 20-29 years - 62.72%, less than 20 years - 16.49%, 40 and above - 5.73%. The majority of the patients lived in Bangkok and most of them came from the Northern and Northeastern regions of Thailand. Ninety seven percent were Thai and 94% were Buddhist. In general, most of them were in low socioeconomic status.*

**Key words:** *Epidemiology, Hydatidiform mole.*

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สมภพ ลิ้มพงศานุรักษ์. ระบาดวิทยาผู้ป่วยครรภ์ไขปลาคอกในโรงพยาบาลจุฬาลงกรณ์  
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ได้ทำการศึกษาระบาดวิทยาของผู้ป่วยครรภ์ไขปลาคอก ซึ่งมารับการรักษาที่ภาควิชา  
สูติศาสตร์รีเวชวิทยา คณะแพทยศาสตร์ โรงพยาบาลจุฬาลงกรณ์ ในระยะเวลา 10 ปี โดยการ  
ศึกษาแฟ้มประวัติผู้ป่วยเหล่านี้ทุกคน และนำข้อมูลเสนอด้วยสถิติเชิงพรรณนา

พบอุบัติการณ์ของครรภ์ไขปลาคอก 1 ต่อ 450 ของผู้คลอด ร้อยละ 62.72 มีอายุระหว่าง  
20-29 ปี ร้อยละ 16.49 อายุน้อยกว่า 20 และร้อยละ 5.73 อายุตั้งแต่ 40 ปีขึ้นไป ส่วนใหญ่ของ  
ผู้ป่วยเหล่านี้อาศัยอยู่ในกรุงเทพมหานครแต่มีภูมิลำเนาอยู่ในภาคกลางและภาคตะวันออกเฉียงเหนือ  
ร้อยละ 97 เป็นคนไทย ร้อยละ 94 นับถือศาสนาพุทธ มีสัดส่วนของผู้ที่มีเศรษฐานะและการศึกษาใน  
ระดับต่ำเป็นจำนวนมากกว่าผู้ที่มีเศรษฐานะและการศึกษาในระดับสูง

Hydatidiform moles (HM) have long been of both clinical and epidemiological interest because it is a significant complication in pregnancy. Reports of the incidence of HM vary by geographic region. The variation of the reported incidence of HM results from numerous biases, such as definition and criteria of HM and the physicians concern and knowledge about it. It is accepted that in developing countries the frequency of HM is much greater than in developed countries. However, the true incidence of HM in each country remains unknown because in most reports it has only been extrapolated from hospital-based studies.

The purpose of this study is to report the epidemiological features of HM in Chulalongkorn Hospital, Bangkok, Thailand.

### Materials and Methods

In January 1984, the trophoblastic disease clinic was set up at the Department of Obstetrics

and Gynecology, Faculty of Medicine, Chulalongkorn Hospital. The clinical data of the patients of this clinic were recorded on separate medical record forms. The histopathological diagnosis was ascertained by a gynecologic pathologist. All patients were followed up by a group of physicians using the same protocol.

The epidemiological data were reviewed for those patients who were diagnosed as having HM and were registered during the period January 1984 to December 1993. Descriptive statistics were used to analyse the data.

### Results

The incidence of HM from the year 1984 to 1993 is shown in table 1. A total of 279 cases of HM were diagnosed and managed during the study period. There were 125,540 deliveries during this period. The overall incidence of HM was one per 450 deliveries.

**Table 1.** Incidence of Hydatidiform Moles per 1000 deliveries at Chulalongkorn Hospital, 1984-1993.

Year	No. of deliveries	Hydatidiform Mole	
		No. of cases	Rate per 1000
1984	15372	47	3.06
1985	13761	33	2.40
1986	11867	28	2.36
1987	12605	21	1.67
1988	13078	24	1.84
1989	13514	20	1.48
1990	11395	31	2.72
1991	10329	24	2.32
1992	11932	32	2.68
1993	11687	19	1.63
<b>Total</b>	<b>125540</b>	<b>279</b>	<b>2.22</b>

Some selected characteristics of the patients and their spouses are shown in table 2 and 3. The mean age of the patients and their spouses were

25.2( SD=7.3 , Range 15-53 ) and 28.5 years ( SD=7.6 ,Range 17-62 ) respectively. The majority of the patients were Thai and Buddhist.

**Table 2.** Some selected characteristics of HM patients and their spouses at Trophoblastic Disease Clinic, Chulalongkorn Hospital, 1984-1993.

Characteristics	Patients	Patients' spouses
AGE (years) :	n = 279	n = 279
Mean $\pm$ SD	25.2 $\pm$ 7.3	28.5 $\pm$ 7.6
Range	15-53	17-62
RACE (%) : Thai	97.49	96.42
RELIGION (%) : Buddhism	93.91	93.91
OCCUPATION (%) :	n = 277	n = 263
Labourer	42.24	70.34
Housewife	35.74	-
Farmer	7.94	6.08
Business	7.22	8.37
Government employee	6.86	14.07
EDUCATION (%) :	n = 259	n = 102
< 7 years	62.93	55.88
$\geq$ 7 years	28.96	39.22
Illiteracy	8.11	4.90

**Table 3.** Some other selected characteristics of HM patients.

Characteristics	No. of HM cases	%
INCOME (Baht) :	n = 241	100
< 3000	101	41.91
$\geq$ 3000	140	58.09
CURRENT LIVING LOCATION	n = 279	100
Bangkok	168	60.21
Central	85	30.47
Northeastern	20	7.17
Northern	6	2.15
Southern	0	0
BIRTH PLACE	n = 273	100
Bangkok	54	19.78
Central	91	33.33
Northeastern	90	32.97
Northern	34	12.45
Southern	4	1.47



## Discussion

HM continues to be an important obstetric problem. Many reports have mentioned the incidence of HM but such reports have been limited by the lack of a precise and reproducible definition of the disease. The wide variation in the frequency of HM has been reported.<sup>(1-13)</sup> It is accepted that the

incidence of HM in Asia and Africa is much higher than in America and Europe (Table 6). We found that the incidence of HM is 1:450 deliveries which is similar to that of previous reports from Asia, Africa and the United Arab Emirates.<sup>(1-9)</sup> The incidence of HM in the U.K. and the USA was about one third lower than the incidence found in Asia.<sup>(10-12)</sup>

**Table 6.** Published incidence of HM.

Frequency	Country	Subgroup	References
1: 306 live births	Japan	-	Takeuchi (1987)
1: 306 deliveries	Thailand	-	Koetsawang (1984)
1: 349 deliveries	Thailand	-	Srivannaboon et al (1974)
1: 510 deliveries	Thailand	-	Surasak et al (1993)
1: 666 pregnancies	Thailand	-	Suntana et al (1974)
1: 491 deliveries	United Arab Emirates	-	Graham et al (1990)
1: 811 deliveries	Singapore	Chinese	Teoh et al (1971)
1: 879 deliveries	Singapore	Malay	
1: 679 deliveries	Singapore	Indian	
1: 379 deliveries	Nigeria		Agboola (1979)
1: 375 deliveries	Nigeria		Ayangade (1979)
1: 1,379 deliveries	U.K.	Hospital based	Womack et al (1985)
1: 1,425 deliveries	U.K.	General population	
1: 1,280 pregnancies	U.S.A.	White	Hayashi (1982)
1: 1,750 pregnancies	U.S.A.	Black	
1: 3,906 pregnancies	Paraguay		Rolon et al (1990)

It has been reported that the rate of HM is virtually constant in women between the ages of 20-29 years. The results of our study showed that 62.72 % of our HM patients were 20-29 years old. But this does not mean that the women in this age group have a higher risk of HM because those women delivering in our hospital are mostly from this age group. However, one of the most consistent findings was the increased risk of HM in women at both extremes of the reproductive age. Matsuura reported that the rate of HM is 60% greater among women under 20 years old and rises dramatically among women over the age of 40 years.<sup>(14)</sup> Paternal age is considered as one of the risk factors but the evidences are not clearly determined. We found

that 57.47% of the paternal ages ranged from between 20 to 29 years. Since most people in Thailand are Thai and Buddhist, we can not, therefore analyse the risk of HM as related to race and religion. Hence the results of this study can not be interpreted in this regard.

From the educational level, 71.04 % were undereducated, and some had not even finished primary school. As to occupations 35.74 % were ordinary housewives and 42.24 % were labourers. Family income was also low, at 41.91 % for those earning less than 3,000 Baht monthly. From the above mentioned details, we can summarize that the socioeconomic status of the patients is in the low level.

The obstetrics history of the patients revealed that about 45.5 % were primigravida and 55.9 % were nulliparous. There were 3 cases ( 1.01%) of previous hydatidiform mole. These evidences did not show much difference from our annual departmental statistics.

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