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## GYNAECOLOGY

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# Compliance with Hormone Replacement Therapy Among Natural Menopausal Women at The Menopause Clinic, Siriraj Hospital

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### ABSTRACT

**Objectives** To determine the long-term compliance of HRT at a tertiary care menopause clinic and evaluate factors associated with HRT compliance.

**Design** Descriptive study.

**Setting** Menopause clinic, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University.

**Subjects** A total of 400 natural menopausal women attending the menopause clinic and started hormone replacement therapy during the year 1996 - 1998.

**Main outcome measures** Compliance with hormone replacement therapy.

**Results** Compliance with hormone replacement therapy at 1 and 2 years were 75.2% and 47.8% respectively. Age at menopause, age at initial HRT, and menopausal symptoms before initial HRT were comparable between compliant and non-compliant groups. Non-compliant group was significantly more likely to experience HRT side effects ( $p < 0.001$ )

**Conclusion** Compliance with hormone replacement therapy at 1 and 2 years were 75.2% and 47.8% respectively. The only significant factor associated with decreased compliance was having side effects after using HRT.

**Key words:** compliance, hormone replacement therapy, menopausal women

Hormone replacement therapy (HRT) has long been used to efficiently treat menopausal symptoms such as hot flashes, urogenital symptoms, etc. In addition, evidences have shown that long term use of HRT could also help prevent cardiovascular disease and osteoporosis among this group of women.<sup>(1,2)</sup> Even though HRT offers such advantages for menopausal women, low compliance with HRT has been reported repeatedly. Hammon CB reported one

year compliance with HRT of less than 40%.<sup>(3)</sup> Eiken and Kolthoff reported only 46% compliance with oral HRT after 8 years of treatment.<sup>(4)</sup> On the other hand, Doren and Schneider reported higher compliance rate of 96%, 76% and 58% after 1, 5 and 9 years respectively.<sup>(5)</sup>

Many reasons have been highlighted for these poor compliances such as lack of knowledge of HRT benefits or fear of the potential side effects including

irregular and return of menses.<sup>(1)</sup> Many strategies have been extensively used to increase acceptance and compliance with HRT, including improved regimens and routes of administration, use of new synthetic steroid, intensive health education, and screening for high-risk women. However, a previous report in Thailand by Techatrissak et al in 1995 has demonstrated only 67.8% and 60% compliance among natural menopausal women after 1 and 2 years respectively.<sup>(6)</sup>

The objectives of this study were to determine the long-term compliance of HRT at a tertiary care menopause clinic and evaluate factors associated with such compliance. The results obtained from this study may help improve a future plan to increase compliance among Thai women.

## Materials and methods

A total of 400 natural menopausal women who first attended the menopause clinic at Siriraj Hospital from January 1996 to December 1998 and received HRT were recruited. Perimenopausal women and those who were using HRT before attending the clinic were excluded. At the time of the first attendance, baseline demographic data as well as menopausal characteristics were recorded. After appropriate counseling, HRT was prescribed in a standard manner. Follow up schedule was explained and appointment was made to each woman, which might be slightly different between cases. Their subsequent

performance was followed for at least 2 years after received HRT. At each visit, compliance and side effects were assessed through information from each woman and reasons for discontinuing therapy were explored. Among those who lost to follow up, phone calls were made to directly contact the person and questionnaires were administered by phone to obtain information upon effectiveness of treatment, side effects, adherence to treatment and reasons of loss to follow up.

Descriptive statistics, including mean, standard deviation, number, and percentage, were used to describe baseline characteristics of women enrolled. In order to determine factors associated with HRT compliance, comparison between compliant and non-compliant women was made. Unpaired t-test and chi square test were used as appropriate. Statistical significance was considered when p value < 0.05.

## Results

Among 400 natural menopausal women recruited in this study, mean age at menopause was  $48.2 \pm 4.6$  years, and mean age of the first consultation was  $53.9 \pm 7.0$  years. The majority of the patients were housewives, married, graduated secondary school with family income of 10,000 - 15,000 Bahts. Menopausal symptoms and duration of menopause before attending the clinic were shown in Table 1.

**Table 1.** Menopausal symptoms and duration of menopause before initial HRT

Characteristics	N (%)
Menopausal symptoms before treatment	
No symptom	71 (17.8)
With symptoms	329 (82.2)
Hot flushes	175 (53.2)
Dyspareunia	99 (30.1)
Incontinence	29 (8.8)
Decreased libido	23 (7.0)
Others	3 (0.9)

Characteristics	N (%)
Duration of menopause before initial treatment	
< 5 years	247 (61.8)
5 - 10 years	88 (22.0)
> 10 years	65 (16.2)

Only 17.8% of menopausal women attending the clinic had no symptom. Among those with menopausal symptoms, hot flushes was the most common symptom these women experienced (53.2%) followed

by dyspareunia (30.1%). Duration of menopause was less than 5 years in the majority of women enrolled (61.8%).

**Table 2.** Compliance of HRT after 1 and 2 years

Years after initial HRT	Compliance N (%)
1 year	301 (75.2)
2 years	191 (47.8)

Compliance of HRT after 1 and 2 years were shown in Table 2. There were nearly 25% of patients who became non-compliant at 1 year. After 2 years of use, only approximately half of the patients continued using HRT (47.8%).

Certain characteristics were compared between compliant and non-compliant groups to determine factors possibly associated with HRT compliance at 1 and 2 years. The results were displayed in Table 3 and Table 4 respectively.

**Table 3.** Factors associated with compliance of HRT at 1 year

Characteristics	Compliant group (N = 301)	Non-compliant group (N = 99)	p value
Age at menopause (mean $\pm$ SD)	48.3 $\pm$ 4.0	47.9 $\pm$ 6.2	0.542*
Age at initial HRT (mean $\pm$ SD)	53.6 $\pm$ 7.2	54.8 $\pm$ 6.1	0.147*
Menopausal symptoms before HRT			
No	59 (19.6%)	12 (12.1%)	0.124**
Yes	242 (80.3%)	87 (87.9%)	
Side effects of HRT			
No	159 (52.8%)	29 (29.3%)	< 0.001**
Yes	142 (47.2%)	70 (70.7%)	

\*Unpaired t - test

\*\*Chi - square test

The results showed that only side effects of HRT significantly associated with HRT compliance at 1 year. Non-compliant group was significantly more likely to experience HRT side effects ( $p < 0.001$ ) than

compliant group. Menopausal symptoms before HRT did not differ significantly between the 2 groups. Moreover, age at menopause and age at initial HRT were comparable between the 2 groups as well.

**Table 4.** Factors associated with compliance of HRT at 2 years

Characteristics	Compliant group (N = 191)	Non-compliant group (N = 209)	p value
Age at menopause (mean ± SD)	48.4±4.1	48.0 ±5.1	0.356*
Age at initial HRT (mean ± SD)	53.9±7.1	53.9±6.8	0.984*
Menopausal symptoms before HRT			
No	30 (15.7%)	41 (19.6%)	0.372**
Yes	161 (84.3%)	168 (80.4%)	
Side effects of HRT			
No	110 (57.6%)	78 (37.3%)	< 0.001**
Yes	81 (42.4%)	131 (62.7%)	

\*Unpaired t - test

\*\*Chi - square test

When considering HRT compliance at 2 years, similar results were observed. Age at menopause and age at initial HRT were comparable between compliant and non-compliant group. Women in compliant group were significantly less likely to

experience side effects of HRT than those in non-compliant group ( $p < 0.001$ ). Both group showed comparable proportion of women with menopausal symptoms before HRT.

**Table 5.** Side effects of HRT during 2-year follow up (N = 400)

Side effects	Number (%)
No side effect	212 (53.0)
Uterine bleeding or spotting	76 (19.0)
Headache	52 (13.0)
Mastalgia	12 (3.0)
Insomnia	11 (2.8)
Weight gain	8 (2.0)
Nausea, vomiting	8 (2.0)
Others	21 (4.3)

During the 2-year follow up, common side effects included uterine bleeding or spotting and headache, as shown in Table 5. These were similar at both 1 and 2 year follow up.

## Discussion

Compliance of HRT is a very important issue in HRT for menopausal women as long-term use could help prevent osteoporosis and cardiovascular disease. The results of this study showed that compliance of HRT among natural menopausal women at the

menopause clinic of Siriraj Hospital were 75.2% and 47.8% at 1 and 2 years of use respectively. Similar pattern was also previously observed in a study in 1995 by Techatraisak et al<sup>(6)</sup> at the same institution, in which compliance of HRT dropped remarkably in the first year of HRT and even more decreased in the second year

(67.8% and 60.0% at 1 and 2 years, respectively). In comparison, a noticeably better compliance of HRT has been reported among Chinese women in Hong Kong<sup>(7)</sup> (81.0% and 63.8% at 1 and 2 years, respectively). In addition, Leung et al<sup>(8)</sup> also recently reported the 5-year compliance rate of 71.1% in Hong Kong, where the overall compliance rates were nearly the same at 2 and 5 years.

On the other hand, studies from Western society have reported much higher compliance. Doren and Schneider<sup>(5)</sup> reported a much higher compliance among German woman, which was 97% at 1 year and 70% at 5 years. However, lower HRT compliance has also been reported. Torgerson et al<sup>(9)</sup> reported only 50% compliance after 1 year among menopausal women who were previously screened for low bone mass density. Reynolds et al<sup>(10)</sup> also reported that 53% of women discontinued HRT by the end of the first year and one-fifth stopped after the first prescription.

Relatively lower compliance of HRT among Asian women might be due to the lack of knowledge of long-term benefits of HRT, its side effects, or cultural differences. Asian women are more likely to live a natural life after menopause than those in the western world. It is also not uncommon that women in some developing Asian countries perceive menopause as a natural physiological phenomenon and were happy that they were getting more time to pray, had a feeling of well-being and felt clean. There was general relief at no longer having children and freedom from worry about contraception. Menopause was usually welcomed if the family size was complete. Osteoporosis and coronary heart disease do not appear to be of major concern to these women.<sup>(11-13)</sup>

The results showed that age at menopause and age at initial HRT did not affect the compliance at 1 and 2 years which differ from that reported by Chung et al.<sup>(7)</sup> However, Ettinger et al noticed the higher compliance among women who had older age at menopause after 1 year of follow up.<sup>(14)</sup>

The majority of natural menopausal women in this study suffered menopausal symptoms before attending the menopause clinic (82.2%). Among them,

the most common symptom was hot flushes (53.2%) which was slightly higher from previous study by Karakoc et al, who reported hot flushes in 42 % of menopausal women before commencing HRT.<sup>(15)</sup> Menopausal symptoms before HRT did not significantly affect the compliance at both 1 and 2 year.

Interestingly, side effects of HRT was the only factor significantly influenced HRT compliance in the first and second year. Those who experienced side effects of HRT were more likely to discontinue using HRT. However, these side effects might not be the actual main reasons for stopping HRT. There might be some other factors that have additional roles in this issue, including awareness of importance of HRT, socio-economic status, level of education, psycho-social supports, and initial intention for HRT. Previous study showed that women who intend to utilize or to continue to utilize HRT perceived significantly more advantages of HRT and more social support for utilize compared with women who did not.<sup>(16)</sup> In addition, another study reported that women who had past regular gynecologic follow up appeared to be the strongest predictor of HRT use.<sup>(17)</sup> Moreover, reporting or recall biases might occur, especially among those who loss to follow up, that these women might not report their reasons for stop using HRT accurately.

The results of this preliminary study may be useful for improving a future plan to enhance compliance of HRT among natural menopausal women both in our institute as well as other settings. Many other factors that might also affect HRT compliance were not available for analysis in this study, including quality of life, severity of menopausal symptoms, psycho-social support, etc. A detailed prospective study should be carried out to obtain more information regarding other factors that possibly affect compliance of HRT among Thai menopausal women. The role of education, individualization of advice, and better management of side effects may help increase the compliance and continuous HRT.

In conclusion, this study demonstrated that compliance with hormonal replacement therapy among natural menopausal women at 1 and 2 years

were 75.2% and 47.8% respectively. The only significant factor associated with decreased compliance was having side effects after using HRT.

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