BRIEF REPORT: Attitudes Toward Hormone Therapy After the Women's Health Initiative

A Comparison of Internists and Gynecologists

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In the Women's Health Initiative (WHI), postmenopausal women receiving combination hormone therapy (HT) experienced more adverse outcomes than placebo recipients. To determine whether gynecologists and internists interpreted the WHI differently, we conducted a survey in which physicians responded to a hypothetical asymptomatic woman who asks whether to continue HT. In response to this scenario, gynecologists were more likely than internists to hold permissive views about prescribing HT (66% vs 35%; $P < .001$). These results suggest that gynecologists may be less concerned than internists about the adverse events associated with HT, or that gynecologists have stronger beliefs about benefits of HT.

KEY WORDS: hormone replacement therapy; attitude of health personnel; physician-patient relations.

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In the randomized Women's Health Initiative (WHI), healthy postmenopausal women with intact uteri received continuous combination hormone therapy (HT) or placebo. During 5 years of treatment, more cardiovascular events, thromboembolic events, and breast cancer cases occurred in the combination HT group.¹ Shortly after the WHI results appeared, we observed that internists in our community generally were advising patients to discontinue HT. However, some patients reported that their gynecologists had downplayed the WHI and had advised them to continue HT. To determine whether gynecologists and internists interpreted the WHI results differently, we conducted this national survey.

METHODS

In October 2002 (3 months after the initial WHI results were published), we mailed questionnaires to randomly selected office-based gynecologists and general internists in the United States; 1000 were sent to each professional group. The mailing list was generated from a commercially available comprehensive physician database.

At the beginning of the questionnaire (see Appendix online), we noted that the WHI demonstrated harmful effects from long-term use of Prempro (conjugated estrogens plus medroxyprogesterone acetate). We then presented a hypothetical asymptomatic 60 year-old patient who had been using Prempro because "she assumes that it's generally good for her health. She recently read about the WHI, and asks whether she should continue taking Prempro." Respondents were given a choice of 5 responses:

1) tell patient it's OK to continue Prempro; 2) remain neutral, allowing her to decide; 3) switch from Prempro to another combination; 4) advise her to stop Prempro; and 5) strongly advise her to stop. Our primary objective was to estimate the proportions of gynecologists and internists that held "permissive" views (responses 1, 2, and 3) or "restrictive" views (responses 4 and 5) about prescribing HT. On Likert-scale items, we asked whether "physicians generally should not prescribe" HT for asymptomatic women without hysterectomy, and for women with hysterectomy (outcomes for women with hysterectomy had not yet been published). Finally, we asked respondents whether they initiated discussions about the WHI, and whether their patients inquired about the WHI.

We sent only one mailing for 2 reasons. First, we believed that the initial mailing might prompt some recipients to re-search the WHI more closely, resulting in systematically different responses to subsequent mailings. Second, because we knew that new practice guidelines would soon appear^{2,3} we were concerned that responses to additional mailings might reflect new guidelines rather than initial independent judgments of clinicians.

Analyses were performed using SAS 8.02 (SAS Institute, Cary, NC). Differences between gynecologists and internists were analyzed using chi-square tests and t-tests. Logistic regression models were used to assess the association between specialty and permissive attitude toward HT while controlling for age, sex, and region. Likert-scale responses were analyzed using the Wilcoxon rank sum test and the Spearman rank correlation.

RESULTS

Sixteen of 2,000 mailed questionnaires were undeliverable. Of the remaining 1,984 questionnaires, 596 were returned (response rate, 30%). Gynecologists were more likely to respond than internists (36.5% vs 23.6%; $P < .001$). We excluded 20 respondents who were neither gynecologists nor internists, saw no outpatients, or were unfamiliar with the WHI; thus, we analyzed 576 responses. Respondents' demographic characteristics, presented in Table 1, were similar to those of the overall sample and national statistics (data not shown).^{4,5}

Physicians' attitudes are presented in Table 2. Gynecologists were much more likely than internists to be permissive about the hypothetical patient's continued use of HT (66% vs 35%; $P < .001$). Logistic regression models revealed no significant effect modification of the association between specialty and attitudes by age, gender, or region. If we had defined "permissive" more narrowly, to include only "OK to continue" and "remain neutral," the difference between groups would have remained significant (50% vs 29%; $P < .001$). Internists were more likely than gynecologists to agree that physicians generally should not prescribe HT for asymptomatic postmenopausal women. For women without hysterectomy, a higher proportion of internists than gynecologists indicated agreement

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Table 1. Characteristics of Internist and Gynecologist Respondents*

	Gynecologists (n=357)	Internists (n=219)	P Value
Mean age, y (SD)	50.8 (9.3)	48.6 (9.4)	.007
Gender, male	256 (72)	149 (68)	.364
Geographic region			.009
Northeast	77 (22)	74 (34)	
Midwest	73 (20)	35 (16)	
South	108 (30)	51 (23)	
West	99 (28)	59 (27)	
Patients have asked about WHI	353 (99)	205 (94)	.001
Initiate discussions of WHI			.001
Most cases	320 (90)	172 (79)	
Prempro only	15 (4)	12 (5)	
Combination therapy only	13 (4)	22 (10)	
No, not routinely	9 (3)	13 (6)	

*Data expressed as number (percentage) unless otherwise noted.

WHI, Women's Health Initiative.

by marking a 4 or 5 (Likert scale from 1 = *strongly disagree* to 5 = *strongly agree*; 71% vs 40%; $P < .001$). For women with hysterectomy, the same pattern occurred (36% vs 17%; $P < .001$). Within each specialty, physicians who agreed with the first item tended to agree with the second item ($r = .61$; $P < .001$).

We performed a "worst-case" sensitivity analysis to determine whether a higher response rate could plausibly have negated the observed difference between internists and gynecologists. We assumed a hypothetical group of additional respondents—sufficient to increase the response rate to 60% for both specialties—in which identical proportions of additional internists and gynecologists held permissive views of HT. A highly significant difference between specialties persisted.

DISCUSSION

These findings indicate that gynecologists were more likely than internists to support continued use of combination HT by asymptomatic postmenopausal women after the WHI results were published. Differences between the two professions were striking, and consistent across several ways of framing the issue.

To our knowledge, no other post-WHI surveys comparing attitudes of gynecologists and other physicians have been published. However, by mid-2003, oral HT prescription rates were still at about 50% of the pre-WHI level.⁶ Although those rates were not analyzed by specialty of prescriber, our results imply that gynecologists may be particularly responsible for persistent HT prescribing.

Prior to the WHI, numerous surveys examined prescribing patterns or physician attitudes toward HT, but only a few compared gynecologists and internists simultaneously. In studies conducted at single HMOs, gynecologists reported less concern than internists and family physicians about risks of thromboembolism and breast cancer from HT.^{7,8} In a survey from 4 northwestern states, gynecologists believed more strongly in benefits of HT than internists and family physicians.⁹ In a 1993–1994 national survey, internists and family physicians were less likely than gynecologists to prescribe HT to asymptomatic women.¹⁰ These pre-WHI differences presumably reflected a stronger belief among gynecologists that long-term benefits of HT outweighed harms. The WHI results presumably should have eliminated these differences, but our results imply that gynecologists resisted the conclusions drawn by the WHI investigators. We suggest several possible reasons for this finding.

First, some gynecologists might believe that even "asymptomatic" postmenopausal women derive intangible quality-of-life benefits from HT that outweigh the small increase in adverse events. When respondents completed our survey in late 2002, the WHI quality-of-life analysis had not yet been published. That analysis (now published) and other data suggest that HT does not enhance quality of life for most asymptomatic postmenopausal women.^{11,12} Second, gynecologists might be more concerned than internists that asymptomatic women will experience persistent debilitating vasomotor symptoms when HT is withdrawn. However, only a minority of women

Table 2. Attitudes Toward Hormone Therapy*

	Gynecologists (n=357)	Internists (n=219)	P Value
Response to woman on Prempro [†]			< .001
OK to continue	29 (8)	5 (2)	
Remain neutral	146 (42)	58 (27)	
Suggest different HT regimen	56 (16)	12 (6)	
Advise to stop	83 (24)	91 (43)	
Strongly advise to stop	37 (11)	46 (22)	
Permissive attitude toward HT [‡]	231 (66)	75 (35)	< .001
Should not prescribe for woman without hysterectomy, median score [§]	3	4	< .001
Should not prescribe for woman with hysterectomy, median score [§]	2	3	< .001

*Data expressed as number (percentage) unless otherwise noted.

[†]For these items, 6 gynecologists and 7 internists gave responses that could not be classified; hence denominators are 351 gynecologists and 212 internists.

[‡]Permissive attitude is the sum of the responses "OK to continue," "remain neutral," and "suggest different HT regimen" from previous item.

[§]Likert scale from 1 (strongly disagree) to 5 (strongly agree).

WHI, Women's Health Initiative; HT, hormone therapy.

experience moderate-to-severe vasomotor symptoms indefinitely.^{11,12} Third, gynecologists might be more likely than internists to believe that adverse outcomes with conjugated estrogens plus medroxyprogesterone would not occur with other HT regimens; indeed, gynecologist respondents recommended alternative HT regimens somewhat more frequently than internists did. However, no long-term data from randomized trials exist for other hormone combinations. Fourth, because internists routinely care for patients with cardiovascular and thromboembolic events, they might be more averse to interventions that increase these risks, even when excess risk is small. Fifth, during the 1990s, the scope of gynecologic practice more explicitly began to include primary prevention of nongynecologic disorders, including cardiovascular disease.¹³⁻¹⁶ In prescribing HT, gynecologists were able to address simultaneously the menopause (a traditional professional role) and modification of cardiovascular risk (a newer professional role). Because the provision of hormonal therapies is a more role-defining element of gynecologic practice than of general internal medicine practice, gynecologists initially might resist new data that challenge previous assumptions about HT.

Results of the estrogen-alone arm of the WHI (for women with hysterectomy) were published after our survey was completed.¹⁷ Although estrogen-alone conferred increased risk for stroke, the overall balance of benefits and harms appeared more favorable than the balance for combination therapy. These estrogen-alone results do not invalidate our survey, which focused on combination therapy. It remains unclear whether gynecologists and internists differ in their interpretation of the estrogen-alone findings.

A limitation of our study is the 30% response rate, which is nevertheless typical for a one-time physician survey.^{18,19} We sent only one mailing because we believed that additional mailings would have biased our results (see Methods); interestingly, a recent analysis suggests that some studies with low response rates from a single recruitment "wave" may in fact be less biased than studies with higher response rates from multiple waves.²⁰ Our respondents were demographically similar to nonrespondents and U.S. physicians generally, and the association between specialty and attitude was not confounded by age, gender, or region. Moreover, worst-case assumptions in a sensitivity analysis did not change our conclusions. Even if our respondents constituted a biased sample, they represent subgroups of internists and gynecologists with strikingly divergent views about HT and the WHI.

In summary, shortly after publication of the WHI results, gynecologists appeared substantially more likely than internists to support continued use of HT. These findings are important for patients, who should be aware that gynecologists and internists might advise them differently about the merits of long-term HT. Future studies should examine whether the attitudes of gynecologists and internists toward HT eventually converge. In addition, our results have implications for health policy: to enhance understanding of variation in medication prescribing, we need additional research on how physicians

interpret new medical knowledge, and how landmark studies are incorporated into clinical practice.

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Supplementary Material

The following supplementary material for this article is available online:

Appendix. Key items from the questionnaire