



THYROID CANCER

Estrogen status is not associated with increased thyroid cancer risk among postmenopausal women

BACKGROUND

The number of patients diagnosed with thyroid cancer has increased dramatically in the past few decades, especially in women. Thyroid cancer is now the fifth most common cancer among women. In addition, some experiments done in laboratories have shown that estrogen might stimulate growth of non-cancerous and cancerous thyroid cells. Based on these observations, some questioned the possibility of a connection between estrogen and thyroid cancer. To answer this question, clinical and population studies have been conducted to investigate the rate of thyroid cancer in women who had hysterectomy, oophorectomy or received treatment with estrogen. However, the results of these studies were mixed in regards to the effect of estrogen on thyroid cancer. In this current study the relationship between thyroid cancer and estrogen has been addressed again.

THE FULL ARTICLE TITLE

Luo J et al. Hysterectomy, oophorectomy, and risk of thyroid cancer. *J Clin Endocrinol Metab* 2016;101:3812-9. Epub July 26, 2016.

SUMMARY OF THE STUDY

The data presented in this study was obtained from Women's Health Initiative (WHI) study; a large population study of women of 50 to 79 years of age conducted in 40 U.S. clinical centers. Subjects in the current study were among participants of WHI who were enrolled during 1993 to 1998. The data from women who had cancer (except for non-melanoma skin cancer) at the time of enrollment in WHI and women who had only oophorectomy (without hysterectomy) was excluded.

A total of 127,566 women were included, about 37% had hysterectomy; 55% of women who had hysterectomy had also oophorectomy. After follow up for many years

(median of 14 years), 344 women were found to have thyroid cancer. Compared to women who did not have surgery, the rate of thyroid cancer diagnosis was higher in women who had hysterectomy alone or hysterectomy and oophorectomy. The increase in thyroid cancer was seen if the surgery was done before age of 50. When the surgery was done after age 50, no difference in thyroid cancer diagnosis was seen. In women who received treatment with estrogen after surgery, the rate of thyroid cancer was lower. The type, size and stage of thyroid cancer were not different among all women in the study regardless of surgery status.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Based on these results, it was concluded that estrogen does not increase the risk of thyroid cancer. The reason for the increased rate of thyroid cancer in women is still unclear. A possible reason could be increased rate of diagnosis, since women with surgery had more physical exams and more tests that could lead to a higher rate of diagnosis.

— Shirin Haddady, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer: <http://www.thyroid.org/thyroid-cancer/>

ABBREVIATIONS & DEFINITIONS

Estrogen: The primary female sex hormone, produced primarily in ovaries

Hysterectomy: Surgery to remove uterus

Oophorectomy: surgery to remove ovaries