Oophorectomy: between one thing and other

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"There is something of shelved spring, shall be the dry flowers that also are there ..."

The Private Life of Ragdolls. Aquiles Nazoa

For quite some time, it has been the subject of debate among clinicians and surgeons, performing bilateral oophorectomy at the time of hysterectomy for a benign condition. The argument in favor of oophorectomy is prevention of further pathology at the ovaries, especially the dreaded and silent ovarian cancer. The argument against it is related to the subsequent hormonal suppression and long-term effects mainly in the cardiovascular and metabolic sphere. The conservation of ovaries without obvious lesions in women younger than 40 years, leaves no doubt as it is considered that before that age, hormonal function is necessary; the problem arises in patients over 40 years, with or without climacteric symptoms, in whom performing incidental oophorectomy during surgery generated by non-neoplastic uterine pathology, looks like a logical and preventive measure. However, it seems that such benefits are not. In the April 2013 issue of the journal Obstetrics and Gynecology, it has been published an analysis in the framework of The Nurses' Health Study, a prospective observational study of women and their health outcomes, begun in 1976 and still in progress, which specifically evaluated the long-term mortality in women undergoing bilateral oophorectomy compared with women who kept their ovaries during hysterectomies performing because a benign uterine disease¹.

It has been evaluated a total of 30,117 women for 28 years, which were grouped according to the age at which underwent hysterectomy: under 50, between 50 and 59 years and older than 60 years. In all women, oophorectomy was associated with lower mortality from ovarian cancer (HR: 0.06) and breast cancer (HR: 0.89), but with increased mortality for coronary heart disease (HR: 1.23), lung cancer (HR: 1.29), colorectal cancer (HR: 1.49), all cancers (HR: 1.16) and all-cause (HR: 1.13). The results did not differ when comparing the three age groups of hysterectomy. Breast cancer was the only condition that showed a lower risk if oophorectomy is performed before 47.5 years, with a HR of 0.82 at age 50 and HR of 1.19 in older than 50 years. Patients under 50 with oophorectomy who did not receive estrogen therapy had increased all-cause mortality compared with patients with oophorectomy who did receive estrogen therapy (HR: 1.41 vs. HR 1.05, p =
0.03); there were also differences regarding the use or not of estrogen therapy in patients who underwent oophorectomy and coronary heart disease mortality (HR: 2.35) and lung cancer (HR: 1.44), so the use of estrogen decreased overall and specific mortality from coronary heart disease and lung cancer in women with oophorectomy before age 50.

An analysis was made on the effect of oophorectomy in patients with high and low cardiovascular risk of mortality from coronary heart disease, and in patients with low risk mortality was higher than in high-risk patients; i.e. oophorectomy in patients at high cardiovascular risk did not increase mortality from coronary causes (HR: 0.9), but in low-risk patients the increase was significant (HR: 1.8). In view of these results, the authors conclude that “...at no age was there an overall survival benefit associated with bilateral oophorectomy compared with ovarian conservation at the time of hysterectomy for benign disease”, besides, additional benefit regarding breast cancer and ovarian cancer, is overshadowed by the significantly increased risks of cardiovascular mortality, lung cancer, colorectal cancer and overall mortality.

This analysis was performed in 2009 with the same group of women followed for 24 years and obtained similar results\(^2\). The main strength of this study, in their different analysis in 2009 and 2013, is that compared patients undergoing hysterectomy with and without oophorectomy, which so far had not been done in observational studies with a group of patients as high\(^3\), because the comparison was made with naturally menopausal patients without hysterectomy. This allows better match the population as all patients underwent a hysterectomy which prevents subsequent periods, modifying hematologic and coagulation values, associated with cardiovascular risk.

Within this context it is important to note also, although it was not evaluated in this study, the occurrence of neurological, cognitive impairment, dementia and Parkinson's disease mainly, occurring in women younger than 50 years undergoing oophorectomy. It has been described neuroprotective effects of estrogen and also the abrupt cessation of the hormonal influence of the ovaries, causes increased pituitary gonadotropins at causing disorders in the brain\(^4\). Besides, in this study from the Mayo Clinic, the findings with respect to general and specific mortality were similar to the study of nurses in patients with bilateral oophorectomy before age 45\(^5\).

It would seem prudent to consider then retain the ovaries during the performance of a hysterectomy for benign pathology in patients without known genetic risk. The bilateral ooforosalpingectomy as risk reducing surgery should be indicated only in patients with established genetic risk for breast and ovarian cancer secondary to BRCA1/2 mutations and Lynch syndrome. There is no evidence that bilateral oophorectomy in the general population reduces mortality, but quite the opposite, so it is not currently recommended as standard practice, and if is necessary to take this action, is suggested to use hormone replacement therapy with estrogen alone specifically in young patients with no contraindications, to avoid long-term sequelae derived from deleterious effect of abrupt hormonal deprivation. The implications of bilateral oophorectomy on quality of life and public health must be considered, discussed with the patient and plan how to counter them, so as not to turn this practice, certainly widespread, in a risk factor for women.

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