

Tamoxifen, chemotherapy or both treatments inhibits the serum concentration of inhibin b and antimullerian hormone in premenopausal patients

Introduction

Breast cancer is the leading cause of cancer death in women in our country, with about 5400 deaths and 19,000 new diagnoses by year. Luminal tumors, which express estrogen receptors, are treated with tamoxifen (TAM). If tumors are spread, chemotherapy is added, and negative triple tumors, because of lack of specific therapy, are treated with chemotherapy.¹

The antimullerian hormone (AMH) and Inhibin-B have been suggested as markers for evaluating ovarian reserve in breast cancer patients treated with chemotherapy.²

Objective

Establish which patients have ovarian reserve and therefore should avoid pregnancy during therapy.

Methods

Serum concentrations of AMH and Inhibin-B were measured by commercially available ELISA Gen II kits from Beckman Coulter. Serum samples from 19 premenopausal patients (7 treated with TAM, 4 with chemotherapy and 8 with TAM + chemotherapy) and 7 controls were analyzed. Of the patients, 2/3 were in amenorrhea after treatment.

Results

- Both Inhibin-B and AMH had undetectable levels in the 7 patients treated with tamoxifen and in 7/8 patients treated with tamoxifen + chemotherapy. In the latter case one of the patients presented high levels of both.

- In the case of treatment with chemotherapy, three of the patients had very low levels of Inhibin-B and undetectable AMH whereas one of them presented a high level of Inhibin-B and AMH intermediate.

Conclusion

Both determinations were equivalent to determine the ovarian reserve of the patients.

- Treatment with tamoxifen inhibited reproductive capacity and overall treatment with chemotherapy as well.
- However in a few patients the ovarian reserve is still elevated despite treatment and pregnancy should be avoided (Figure 1).

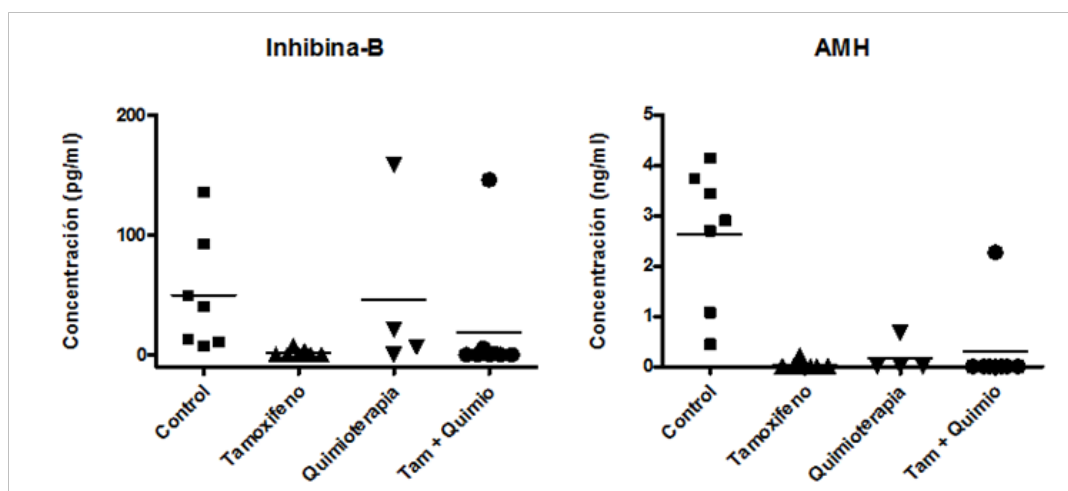


Figure 1

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None.

Conflicts of interests

The authors declare that there is no conflict of interest.

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