

DOES OVARIAN TISSUE CRYOPRESERVATION BEFORE NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER PATIENT IMPACT THE OVARIAN RECOVERY?

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Abstract Body

Does ovarian tissue cryopreservation before neoadjuvant chemotherapy in breast cancer patient impact the ovarian recovery?

Introduction: Neoadjuvant chemotherapy is a widely used treatment for young breast cancer (BC) patients. Sequential chemotherapy is now well-known to induce significant follicular depletion and higher risk of infertility. Make the choice of oocyte or ovarian tissue cryopreservation (OTC) techniques for fertility preservation in neoadjuvant situation is challenging regarding both fertility and oncologic issues. To date, the impact of ovarian pieces removal on the ovarian recovery is unknown. We aimed to prospectively investigate the pattern of menstrual function and AMH levels recovery in patients who benefit from OTC compared to those who did not.

Patients and Methods : 72 neoadjuvant BC women, aged 29 +-4, were prospectively followed-up in the Fertility Observatory of the Lille University Hospital. All have been offered OTC. Menstrual function and AMH levels variations were followed-up longitudinally, until + 12-24 months after the end of treatment. Women who benefit from OTC were matched on age to patients who declined OTC. 60 patients completed the follow-up until 12 months and were included in the statistical analysis.

Results: Among the 72 recruited patients, 59 % accepted the OTC whereas 41% declined. OTC patients and non-OTC did not differ regarding BMI, basal AMH, tumoral characteristics. Mean number of cryopreserved fragments was 13+-5. AMH curves highlighted same pattern between the 2 groups with a depletion phase during chemotherapy and partial recovery phase after. AMH values were significantly lower in the OTC group during chemotherapy and at time + 3, +6 months. At time + 12, AMH levels were no longer significantly different. No difference in the menstrual function was observed between the 2 groups.

Conclusion: 12 months after the end of treatment, no difference on the ovarian recovery was highlighted between OTC women versus non-OTC women.