DISCOVERY OF SPONTANEOUS OVULATION USING AMH SERUM LEVELS IN A POI PATIENT AFTER MULTIMODAL TREATMENT OF BREAST CANCER

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It is common during the treatment of various forms of cancer that female AYA patients will experience premature ovarian insufficiency (POI). At our hospital, a young adult patient suffering form POI after multimodal breast cancer treatment was able to regain ovarian function. This was assessed by tracking AMH serum levels. At 28 years of age, the patient sought male factor infertility treatment at our hospital. At that time, her serum AMH level was 1.85ng/ml. At 31 years old, the patient was diagnosed with and treated for breast cancer using chemotherapy. The patient, in remission, returned to our hospital with the desire to become pregnant. At this point, the patient, a nulligravida, was diagnosed with POI at 33 years old. Serum AMH levels were found to be ＜0.10ng/ml. We treated her with several hormonal therapy, however, there was no return of an ovulatory cycle. A year after her diagnosis of POI, we suspected a spontaneous return of ovulation based on her basal body temperature. We measured her AMH levels and found it be 0.14ng/ml. Following this, the patient begun ART. After two unsuccessful attempts of embryo transfer, on the second attempt, the patient became pregnant. At this point, the patient's serum AMH level was 0.18ng/ml. During pregnancy, the patient's serum AMH level increased to 0.20ng/ml and dropped slightly to 0.18ng/ml after the infant was delivered. In this case, the high toxicity of chemotherapy damaged the patient's gonadal function leading to POI. However, three years after chemotherapy, the patient ovulated spontaneously and became pregnant after the fourth OPU. During the course of her many treatments at our hospital, the patient's serum level of AMH changed along with her ability to ovulate. This suggests the possibility that ovulation and the ability to become pregnant may be predicted by this change of serum AMH levels over time.