Cryopreservation of unfertilized oocytes has become one feasible option for patients with hematological malignancies who wish to preserve future fertility.

We report the first successful pregnancy and live birth case where chronic active Epstein-Barr virus infection (CAEBV) was present in a patient who underwent bone marrow transplantation.

The patient, a 30-year-old single woman, was diagnosed with CAEBV, and total body irradiation in preparation for bone marrow transplantation was planned.

Under sufficient counseling and explanation, we decided to cryopreserve unfertilized oocytes before the treatment.

Three cycles of mild ovarian stimulation using clomiphene citrate combined with human menopausal gonadotrophine injection were performed and sixteen oocytes were harvested. They were cryopreserved by vitrification procedure. The patient underwent total body irradiation and received allogenic bone marrow transplantation.

She married at 39 years old and consulted our clinic when she was 40 years old due to her wish for a child. On the third cyclic day, the patient’s hormone profile was as follows: LH: 19.2 IU/L, FSH: 17.7 IU/L, and estradiol was 45 pg/ml.

At the first trial, three cryopreserved oocytes were thawed and fertilized by the patient’s husband’s sperm by intracytoplasmic sperm injection (ICSI), and one of the three embryos was transferred into her uterus. However, this trial resulted in failure. At the second trial, one blastocyst, which was cultured from three thawed and fertilized oocytes, was transferred into patient’s uterus and resulted in pregnancy. Her pregnancy course had been uneventful and delivered a healthy male baby by Cesarean section in the 41st gestational week.