FERTILIZING CAPACITY OF CRYOPRESERVED SPERMATOZOA FROM PATIENTS WITH CANCER IN THE ERA OF ICSI.

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INTRODUCTION: Controversy exists regarding the benefits of sperm cryopreservation in patients with cancer, and the fertilizing capacity of these sperm after long term storage. Few reports are available in the literature addressing this subject. The objective of this study was to evaluate the outcome of cryopreserved sperm from patients with cancer using the latest assisted reproductive techniques (ART).

METHODS: We studied 9 patients with cancer who transferred their cryopreserved semen from our sperm bank to the outside in vitro fertilization (IVF) programs for ART. These patients had the following diagnosis: Hodgkin's disease (n = 4), testicular cancer (n = 2), prostate cancer (n = 2), and leukemia (n = 1). The length of storage ranged from 14 to 135 months (mean: 50.4 ± 49.8 months).

RESULTS: Out of the 9 patients, 8 used their sperm for some form of ART procedure. Successful fertilization by intracytoplasmic sperm injection (ICSI) was reported in 6, resulting in 3 pregnancies (1 delivery and 2 miscarriages). No fertilization occurred in patients undergoing intrauterine insemination (n = 1) or IVF (n = 1). Both of these men are planning to use their sperm for ICSI. In the 3 cases that had successful fertilization, the reasons for lack of pregnancy were: failure of implantation (n = 1); failure of ovulation and poor egg quality (n = 1); and unknown reasons (n = 1). The mean post-thaw motility was 14.6 ± 12.4%, and the mean total motile sperm count was 26.2 ± 39.0 X 10^6.

DISCUSSION: These results indicate that poor quality cryopreserved spermatozoa from cancer patients, irrespective of the length of storage, may provide successful results with the latest micromanipulative techniques such as ICSI. Sperm banking should be therefore recommended strongly for all men with cancer who may wish to have children in the future.