

Abstract form

Effect of cryopreservation on semen quality in testicular cancer patients

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Current techniques of cryopreservation of human semen result in a significant decrease in post-thaw sperm quality. The pregnancy rate with cryopreserved sperm obtained from patients with testicular cancer is reported to be inferior as compared to the normal fertile men. The aim of this study was to compare the effect of cryopreservation on post-thaw sperm quality between a group of patients with testicular cancer and a group of normal volunteers.

Methods

The pre-freeze and post-thaw semen analysis results of 97 specimens obtained from 25 patients with testicular cancer and 15 normal volunteer who were referred for sperm banking over a three-year period were analyzed for this study. Pre-freeze and post-thaw motion parameters (motility, velocity, linearity, ALH, motility index, motile sperm count) as well as percentage changes were analyzed and compared between the groups.

Results

Significant differences were seen in pre-freeze motility and motile sperm count in patients as compared to donors ($p=0.01$). There was a significant decrease in post-thaw motion parameters in both patients and donors ($p<0.001$). However, the overall percent changes from pre-freeze to post-thaw values in patients were not statistically different as compared to donors.

Conclusions

Although the pre-freeze sperm quality in patients with testicular cancer was inferior as compared to normal fertile individuals; the changes in motion parameters from pre-freeze to post-thaw semen analysis were found to be not statistically different. In summary, our results indicate (1) that the effect of cryopreservation on sperm quality in patients with testicular cancer is identical to normal fertile men and (2) the differences in post-thaw values are probably due to poor pre-freeze parameters. Based on this study, efforts should be focussed on improving sperm banking techniques.