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JOURNAL ARTICLE

Sperm cryopreservation for men with nonmalignant, systemic diseases: a descriptive study

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Cytotoxic drugs and immunosuppressive therapies are used to treat patients with nonmalignant, nontesticular systemic diseases. These therapies can permanently suppress spermatogenesis. Sperm cryopreservation before treatment theoretically could give these men the opportunity to achieve a pregnancy with a woman later in life when the couple decides to do so. However, it is not known whether pretreatment sperm quality in these men is good enough to be used for assisted reproductive techniques. The main objective of this study was to determine the usefulness of cryopreservation in this patient population by: 1) assessing their pretreatment semen quality (eg, count, motility, and motion kinetics) and comparing it with that of healthy donors before and after cryopreservation; 2) comparing patients' pretreatment semen characteristics with World Health Organization reference values for normal sperm; and 3) examining the differences in semen parameters among patient groups. Semen specimens were obtained from 25 healthy donors and from 23 patients with a variety of disorders (12 had autoimmune disorders, 4 had kidney disorders, 3 had diabetes, 2 had ulcerative colitis, and 2 had heart transplants). All patients, except those with diabetes, required immunosuppressive or cytotoxic therapy. Although the pretreatment quality of the semen of these patients was not as good as that of donors, semen samples were within the normal reference range of the World Health Organization. No statistically significant differences in sperm parameters were found within the 4 patient groups except for those with diabetes ($n = 3$), who showed poorer sperm counts ($P < .04$). However, no conclusive evidence can be reached due to the small sample size. Our results indicate that pretreatment semen quality in these patients is adequate for reproductive techniques. We believe that cryopreservation should be offered to patients of reproductive age with disease or treatment regimens that may cause infertility.

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