IS POOR SEMEN QUALITY IN MEN WITH MALIGNANCIES DUE TO PRE-EXISTING DEFECTS IN SPERMATOGENESIS?

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It is well known that sperm quality is often poor in men with malignancies at the time of their cancer diagnoses. The low sperm density may be an indirect effect of surgery and anesthesia or it may be due to a decrease in sperm production after orchiectomy. It is possible that the stress of discovering that one has a potential fatal disease requiring unpleasant treatment might be sufficient to lower semen qualities. Physical and mental stress, genetic factors, and hormonal imbalances may all be responsible for the altered spermatogenesis. The goal of our study was to evaluate the histology of multiple biopsies performed in orchiectomy specimens due to testicular cancer. Thirty-two patients with testicular cancer (seminoma) were included in this retrospective study at a teaching hospital. We evaluated the testicular histology surrounding or associated with the seminoma. Testicular histology was divided into five different patterns: maturation arrest, germ cell aplasia, atrophy, hypospermatogenesis, or normal histology. Maturation arrest was found in 15 testes, germ cell aplasia in 4, atrophy in 7, atrophy plus germ cell aplasia in 5, and only 1 case of normal spermatogenesis. Our results show that most of the testicular cancer patients (97%) have defects in spermatogenesis. Abnormal testicular histology in patients with testicular tumor might indicate pre-existing spermatogenesis defects or local tumor effects that are responsible for the impaired semen analyses usually observed in patients with seminoma. Testicular histology when performed in contra-lateral testis should help in discriminating between these two pathologies. Sperm cryopreservation should therefore, be recommended for all patients with testis cancer who may desire to have children in the future.