
Dramatic improvements in patient survival with almost total reversal in testicular cancer and Hodgkin's disease have led them to resume their pre-illness lifestyles. However, the very treatment that cures them can also render them sterile. Cryopreservation of semen offers a chance of fertility in these patients. Though, poor semen quality after cryopreservation is a major impediment to future fertility. We studied how cryopreserved semen samples from such patients prior to cancer treatment respond to artificial motility stimulants and whether this response was related to patient age, type of disease, or extent of disease. Semen samples from 17 cancer patients were stimulated with pentoxifylline (2.5 mM and 5 mM), and 2-deoxyadenosine (2.5 mM). Sperm viability and semen motion characteristics (curvilinear velocity, straight line velocity, linearity, average path velocity, and amplitude of lateral head displacement) were assessed before adding the stimulant, and after 60 minutes. Compared with baseline values, sperm motion was significantly greater both immediately after adding either stimulant (P<0.017) and at 60 minutes (P<0.05). There was no significant correlation between sperm motion characteristics before or after stimulation or to patient age or type of cancer. Extent of the disease (stage III and IV) negatively correlated with the percentage of stimulation. Therefore, it is important that cryopreservation in these cancer patients be encouraged. These patients can benefit from artificial stimulation in conjunction with assisted reproductive techniques and have the option of initiating a successful pregnancy.