

Journal of Andrology, Vol 15, Issue 6 608-613, Copyright © 1994 by The American Society of Andrology

JOURNAL ARTICLE

Effect of low-dose testicular irradiation on sperm count and fertility in patients with testicular seminoma

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The treatment of seminoma with radiation therapy risks transient infertility. We have prospectively followed eight patients with stage I seminoma of the testicle. All patients underwent radical orchiectomy of the affected testis. The mean age of the patients was 32.9 years (range 24-40). Each patient was treated with megavoltage radiation with a 10- or 18-MV linear accelerator. The remaining testicle was shielded using a standard lead enclosure, and the mean testicular dose was 44 cGy (range 20.8-78.2). Semen specimens were delivered to the lab within 30 minutes of ejaculation. All specimens were analyzed using a computer-assisted sperm analyzer. Pretreatment parameters were within normal limits for all but one patient; one patient presented with a borderline normal sperm count at 18 and 22 x 10(6)/ml. Following treatment, there was a decrease in sperm count, detected at 3 months, to < 10 x 10(6)/ml (range 4.4- 8.6 x 10(6)) in all patients except one, who presented with an initial pretreatment count of 189 x 10(6)/ml, which decreased to 58 x 10(6)/ml at 3 months, 32 x 10(6)/ml at 6 months, and rose to 325 x 10(6)/ml by 12 months following treatment. Although the sperm count for this patient (D.L.) was within the normal range, the post-radiation sperm count was less than 20% of the pretreatment count. There was no difference in the motility at 3 months, the mean of which was 51.3%. One patient's (F.C.) wife conceived at 9 months following treatment, one at 12 months (J.R.), and one (J.S.) at 14 months, and all have delivered normal infants. (ABSTRACT TRUNCATED AT 250 WORDS)

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