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INVITED COMMENTARY

Male Fertility

Azoospermia and the cancer patient: are there any options?

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The fact that most men are severely distressed by pharmaceutical and/or surgical treatments resulting in functional castrations is inherently obvious. Unfortunately, significant male infertility, predictable after some types of treatment, is often not considered or discussed with patients.

As Wibowo *et al.*¹ discussed in their chapter, differences in how medical conditions affecting fertility are accepted are markedly different between diseases of “elderly men” versus those conditions found while men are in their 20s or 30s. Age-based variability in counseling is inherent in multiple disease states. For example, consider how many patients undergoing radical prostatectomy and/or androgen deprivation therapy are counseled regarding their options for fertility preservation. While no studies exist documenting these numbers, it can be imaged that the numbers would be low. This is in stark contrast to those younger men undergoing cancer treatment.² While admittedly the population demographics and stage of life in each population is variable, given that men of advanced age are fathering children more frequently, it is not unreasonable to ask older men about their family planning goals.

One interesting situation that warrants further discussion is the frequency by which men with testicular cancer are offered cryopreservation for fertility preservation. While increased attention has been being brought to this issue over the past few years,² more counseling for this group of patients is needed.

A unique case that could also be considered is men with synchronous or metachronous testicular tumors in whom further treatment would render them anorchid. These men will hopefully be offered a semen analysis and cryopreservation.³ If semen analysis

reveals an adequate sample, then the choice for cryopreservation becomes clear. Consider, however, that these men may exhibit azoospermia at the time of fertility assessment. Is that the end of what we should be offering patients?

Kohn *et al.*³ reported in 2001 on the case of male who had a left orchiectomy and RPLND at age 18 years followed by a metachronous testicular cancer 19 years later requiring orchiectomy. Preoperative semen analysis yielded an azoospermic sample³ but the authors proceeded to perform testicular sperm extraction in attempts to retrieve sperm. While none were identified and no pregnancy was observed, the idea was ahead of its time. Years later, Carmignani *et al.*⁴ presented a case series on four azoospermic patients who had microTESE performed *in situ* at the time of frozen section for planned partial orchiectomies. Spermatozoa were identified in four patients with no pregnancies recorded.

Consequently, it is important to consider that men with azoospermia at the time of testicular cancer should be offered microTESE to identify any spermatozoa for cryopreservation. These men would potentially then have a chance to father children in spite of their azoospermia. Further studies are needed to determine whether this approach would be an appropriate management strategy.

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