

THE 25TH VOLUME: A MILEPOST IN ANDROLOGY

Preface

The *Journal of Andrology* published its premier volume 25 years ago at approximately the same time that Robert Edwards and Patrick Steptoe performed the first successful trials of in vitro fertilization using human gametes. During the subsequent quarter century, the field of andrology has undergone a series of revolutions, many of which were tracked by the *Journal*. We are currently in the midst of an acceleration in the pace of andrological discoveries. The human Y chromosome has been sequenced. The development of a male phenotype from its genotype is being rapidly elucidated through advances in reproductive genetics. In the course of obtaining the Y sequence, men have learned more about their genetic heritage. For example, it has been hypothesized that 1 in 200 men is a descendant of Ghengis Khan (Zerjal T, Xue Y, Bertorelle G, American Journal of Human Genetics, 72: 717–721, 2003).

Several species have been cloned, first from female cumulus cells and subsequently from male fibroblasts in mice. If somatic cell nuclei can fill in for the sperm, are we soon to discard the male gamete as a biological relic? Our concept of the fertilizing ability of sperm has become a shifting target. With intracytoplasmic sperm injection (ICSI), motility is not necessary; neither is normal morphology. Male progeny can result, using assisted reproductive techniques, sired by fathers with genetic defects such as Kartagener syndrome, which leaves sperm unable to swim, or Klinefelter syndrome. Indeed, spermatozoa need not even be genetically normal to effect fertilization. However, mouse embryonic stem cells recently have been shown to possess the ability to transform into sperm, evoking the future prospect of using sperm as vehicles to correct for paternal genetic defects. Indeed the application of ICSI, which could render some aspects of andrologic study less clinically relevant, has provided critical insight into the remarkable role that the male gamete plays in early human embryonic development. Without the observations from ICSI, we may have taken decades to understand the critical role of spermatozoal structures such as the sperm aster after fertilization.

To what extent were these remarkable events in andrology anticipated in articles that were published in vol-

ume 1 of the *Journal* in 1980? The first volume had 34 articles, which fell into the following broad categories: sperm (4), male tract (8), testis function (3), hormone (15), contraception (3), and other (1). There were 5 articles in 1980 on vasectomy, focusing on its endocrine and immunological consequences and evaluating the prospects for reversibility of vasectomy. At that time, there were only 2 contraceptives available for men, vasectomy and condom, although hormonal methods were under intensive investigation. In 2003 the previous sentence still describes the status quo. Solving the problem of male fertility regulation safely and reversibly has proved to be a difficult challenge. Although new male contraceptive products have yet to appear on the market, a torrent of information about sperm surface proteins, acrosomal enzymes, and the endocrine basis of spermatogenesis has become available. The practical aspects of this knowledge have been realized not for male contraception (at least not yet) but its opposite, assisted fertility. The ability to conceive children has been extended even as technical advances have yet to be fully scrutinized from an ethical standpoint. Rather than remaining idle on the sidelines, the *Journal* started a Bioethics and Law Forum in 1999 to involve basic and clinical scientists in a discussion of the ethical implications of andrology.

We may not be able to solve the mysteries or untie the knots of ethical dilemmas raised by andrological studies alluded to above, but this anniversary year will be the occasion to look back to the first issue of the *Journal* and reflect (in a series of invited reviews) on the growth of knowledge and improvements in male reproductive health. To celebrate the 25th anniversary of this *Journal*, we have asked five original authors to revisit articles published in the first volume of the *Journal of Andrology* from 1980. Each of those reviews will be presented in a subsequent issue of the *Journal*. In further celebration of the 25th anniversary of the *Journal*, the covers will be printed in silver. We hope you continue to enjoy the novel advances presented in the *Journal* as well as our historical perspective.

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