al demonstrate the superiority of density gradient centrifugation using Percoll\* over a simple sperm wash in the preparation of sperm for intrauterine insemination with pregnancy rates as the outcome measure. Unfortunately, Percoll is no longer available for clinical use due to concern over possible endotoxin contamination. Centola et al indicate that the commercially available replacements for Percoll, Enhance\* and PureSperm,† are just as effective. Density centrifugation remains the favored method of sperm processing by most andrology laboratories.

Jonathan P. Jarow, M.D.

## Controlled Comparison of Percutaneous and Microsurgical Sperm Retrieval in Men With Obstructive Azoospermia

Y. R. Sheynkin, Z. Ye, S. Menendez, D. Liotta, L. L. Veeck and P. N. Schlegel, Department of Urology, James Buchanan Brady Foundation, Center for Reproductive Medicine and Infertility, New York Hospital-Cornell Medical Center and Population Council, Center for Biomedical Research, New York, New York

Hum. Reprod., 13: 3086-3089, 1998

Permission to Publish Abstract Not Granted

## A Prospective Study of Multiple Needle Biopsies Versus a Single Open Biopsy for Testicular Sperm Extraction in Men With Non-Obstructive Azoospermia

U. I. O. EZEH, H. D. M. MOORE AND I. D. COOKE, University Departments of Obstetrics and Gynaecology, Jessop Hospital for Women, and Department of Molecular Biology and Biotechnology, University of Sheffield, Sheffield, United Kingdom

Hum. Reprod., 13: 3075-3080, 1998

Permission to Publish Abstract Not Granted

## Multiple Testicular Sampling in Non-Obstructive Azoospermia—Is it Necessary?

R. Hauser, A. Botchan, A. Amit, D. Ben Yosef, R. Gamzu, G. Paz, J. B. Lessing, L. Yogev and H. Yavetz, Institute for Study of Fertility, and Sara Racine IVF Unit, Lis Maternity Hospital, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel

Hum. Reprod., 13: 3081-3085, 1998

Permission to Publish Abstract Not Granted

Editorial Comment: Since the advent of intracytoplasmic sperm injection has allowed for in vitro fertilization using low numbers of poor quality sperm, many patients previously considered sterile are now undergoing sperm harvesting procedures. The best method to acquire sperm depends on the cause of azoospermia, the skills and preferences of the harvester, and the needs of the embryology laboratory. The cause of azoospermia may be nonobstructive, when sperm are only found within testicular tissue, or obstructive, when sperm may be found in various sites along the genital tract depending on the site of obstruction.

These 3 articles focus on various aspects of this issue. Sheynkin et al demonstrate that sperm can be obtained from the testis or epididymis of men with obstructive azoospermia. The percutaneous testis biopsy technique proved to be better than fine needle testicular aspiration in their hands. The sperm yield of microsurgical epididymal sperm aspiration was 100-fold greater than testicular biopsy but the yield of biopsy was sufficient to perform intracytoplasmic sperm injection. The ultimate choice of sperm harvesting technique for patients with obstructive azoospermia appears to balance on the microsurgical capability to perform microsurgical epididymal sperm aspiration, which will maximize the number and quality of sperm obtained as well as facilitate sperm cryopreservation versus percutaneous biopsy, which is less invasive but needs to be performed with every in vitro fertilization cycle. The other 2 articles deal with sperm harvesting from men with nonobstructive azoospermia. These studies confirm my own clinical experience that a significantly larger volume of testicular tissue must be obtained in this patient population to maximize the chance of finding sperm that could be used for intracytoplasmic sperm injection. Thus, an open approach to testicular biopsy is preferred and multiple sites frequently must be sampled.

Jonathan P. Jarow, M.D.

<sup>\*</sup> Conception Technologies, San Diego, California. † Gen X International, Madison, Connecticut.