

Manual of Sperm Retrieval and Preparation in Human Assisted Reproduction



Manual of Sperm Retrieval and Preparation in Human Assisted Reproduction by Phoebe Bailey

★★★★☆ 4.7 out of 5

Language : English
File size : 10279 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 146 pages



Assisted reproductive technologies (ARTs) have revolutionized the treatment of infertility, enabling couples who are unable to conceive naturally to have children. Sperm retrieval and preparation are essential steps in many ART procedures, such as in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI). This manual provides a comprehensive overview of the various sperm retrieval and preparation techniques used in human assisted reproduction, including their indications, methods, and outcomes.

Indications for Sperm Retrieval

Sperm retrieval may be indicated in a variety of situations, including:

- Azoospermia (absence of sperm in the ejaculate)
- Severe oligospermia (low sperm count)

- Asthenozoospermia (poor sperm motility)
- Teratozoospermia (abnormal sperm morphology)
- Ejaculatory dysfunction
- Retrograde ejaculation
- Vasectomy

Methods of Sperm Retrieval

There are several different methods of sperm retrieval, including:

- **Ejaculated sperm:** This is the most common method of sperm retrieval and is used when the man is able to produce a semen sample through masturbation or intercourse. The semen sample is then processed to isolate the sperm.
- **Surgically retrieved sperm:** This method is used when the man is unable to produce a semen sample through ejaculation. There are two main types of surgical sperm retrieval:
 - **Testicular sperm extraction (TESE):** Involves removing a small piece of tissue from the testicle and extracting sperm from the tissue.
 - **Microsurgical epididymal sperm aspiration (MESA):** Involves aspirating sperm from the epididymis, a small tube that carries sperm from the testicles to the penis.
- **Electrically stimulated ejaculation:** This method is used in men with spinal cord injuries or other conditions that prevent them from

ejaculating voluntarily. A small electrical current is applied to the penis, which stimulates the muscles responsible for ejaculation.

Sperm Preparation

Once sperm is retrieved, it must be prepared before it can be used in ART procedures. Sperm preparation typically involves the following steps:

- **Washing:** The sperm is washed to remove seminal fluid and other debris.
- **Concentration:** The sperm is concentrated to increase the number of sperm per milliliter.
- **Selection:** The sperm is selected for motility, morphology, and other factors to ensure that only the best quality sperm is used in ART procedures.

Outcomes of Sperm Retrieval and Preparation

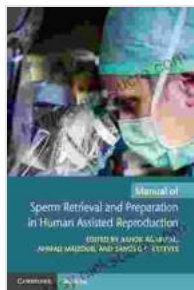
The success of sperm retrieval and preparation depends on a number of factors, including the underlying cause of infertility, the method of sperm retrieval, and the patient's age. In general, the success rate of sperm retrieval is about 80%, and the success rate of sperm preparation is about 60%. The overall success rate of ART procedures using sperm retrieval and preparation is about 30-40%.

Sperm retrieval and preparation are essential steps in many ART procedures. The choice of sperm retrieval method and preparation technique depends on the underlying cause of infertility and the patient's individual circumstances. With careful selection and preparation, sperm

retrieval and preparation can help couples who are unable to conceive naturally to have children.

References

1. Azziz, R., & Wing, D. A. (2012). Manual of sperm retrieval and preparation in human assisted reproduction. Cambridge University Press.
2. Esteves, S. C., & Roque, M. (2013). Sperm retrieval techniques. In ART and science of assisted reproductive technologies (pp. 139-160). Springer Milan.
3. Mehta, A., & Sanchez, A. M. (2014). Sperm preparation techniques for assisted reproductive technologies. In Male Fertility and Infertility (pp. 395-418). Springer International Publishing.



Manual of Sperm Retrieval and Preparation in Human Assisted Reproduction by Phoebe Bailey

★★★★☆ 4.7 out of 5

Language : English
File size : 10279 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 146 pages

FREE

DOWNLOAD E-BOOK





Balancing Your Hormones Naturally: Regaining Fertility and Living a Better Life

Hormones play a vital role in our overall health and well-being. They regulate everything from our metabolism and digestion to our sleep patterns and fertility. When...



Random Forest Encounters: Random Encounter Tables for Fantasy Tabletop RPGs

Enrich Your Campaign with Endless Possibilities Embark on extraordinary adventures...