Seminal Hypo-and Hypervolemia

Balasingam Balagobi, Department of Surgery, University of Jaffna, Jaffna, Sri Lanka **Sivalingarajah Raguraman,** Department of Obstetrics and Gynecology, University of Jaffna, Jaffna, Sri Lanka **Rajasingam S Jeyendran,** Androlab Inc., Oakbrook Terrace, IL, United States

© 2024 Elsevier Inc. All rights reserved, including those for text and data mining, Al training, and similar technologies.

This is an update of Rajasingam S. Jeyendran, Milica Ivanovic, Seminal Hypo- and Hypervolemia, Editor(s): Michael K. Skinner, Encyclopedia of Reproduction (Second Edition), Academic Press, 2018, Pages 70–72, ISBN 9780128151457, https://doi.org/10.1016/B978-0-12-801238-3.64838-9.

Introduction	1
Outline	2
Aspermia and Anejaculate	2
Hypovolemia	2
Artifactual Causes	3
Container for Sample Collection	3
Behavioral Causes	3
Biological Causes	3
Psychogenic Causes	3
Pathologic Causes	3
Hypervolemia	4
Conclusion	4
References	4

Abstract

Semen volume refers to the quantity of ejaculate produced and is necessary in transporting sperm to or near the cervix during coitus. An abnormal volume may help to identify why a couple has failed to conceive. The semen volume is also important to calculate the total number of sperm in the ejaculate. For clinical interpretation ejaculate volume is classified as: Aspermia and Anejaculate if no ejaculate following orgasm; Hypovolemia if the ejaculate is 0.5 mL or less; Hypervolemia if the ejaculate is more than 6.0 mL. It should be emphasized that the measurement of semen volume is an essential part of routine semen analysis since it may help to identify and correct fertility impairing pathology.

Key Points

- Aspermia and Anejaculate: no ejaculate following orgasm.
- In Aspermia/Anejaculate, voided urine sample following masturbation must be evaluated for the presence of fresh sperm to rule out the retrograde semen flow.
- Hypovolemia if the ejaculate is 0.5 mL or less.
- Artifactual, behavioral, biological, psychogenic, and pathologic etiologies cause hypovolemia.
- Hypervolemia if the ejaculate is more than 6.0 mL and Hypervolemia has a minimal or no effect on spermatozoon fertilizing potential.

Introduction

Semen volume refers to the quantity of ejaculate volume which produced by male partner. The semen volume is also important to calculate the total number of sperm in seminal fluid analysis and identify the pathologies related to spermatogenesis and sperm transport. For clinical interpretation ejaculate volume is classified as: Aspermia and Anejaculate if no ejaculate following orgasm; Hypovolemia if the ejaculate is 0.5 mL or less; Hypervolemia if the ejaculate is more than 6.0 mL.

Semen volume is the quantity of ejaculate produced and represents the sum of secretions from the accessory sex glands (seminal fluid) as well as sperm and other cellular components. Seminal fluid is comprised mainly of secretions by the seminal vesicles and prostate gland, with a small amount from the bulbourethral glands and epididymis. The seminal vesicles contribute approximately 75% of the ejaculate volume; the prostate provides another 20% and the remaining secretions, spermatozoa, and non-sperm cells make up approximately 5% of the ejaculate. During ejaculation, the