



Shkempi E<sup>1\*</sup>, Daniele N<sup>2</sup> and Zinno F<sup>3</sup>

<sup>1</sup>Medical Center Dani Andrology, Tirane, Albania, Italy

<sup>2</sup>Immunohematology Section, Tor Vergata University and CryoLab - Stem Cells Manipulation and Cryopreservation Laboratory, Rome, Italy

<sup>3</sup>Azienda Ospedaliera di Cosenza, Italy

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**\*Corresponding author:** Entela Shkëmbi, Laboratory Manager in the Semiology Laboratory Dani Infertility Clinic, Rruga Qemal Stafa Mbrapa, Prokurorisë së Përgjithshme Pall, ENI nr 13, Tiranë, Albania, Italy, Tel: +355 696674345; +355674847664; E-mail: e.shkempi86@yahoo.com

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## Short Communication

# Panhypopituitarism and Azoospermia

## Abstract

Hypopituitarism may involve the loss of one, several or all hormones of the pituitary gland. It is therefore necessary to complete to determine which hormone (s) are deficient and need to be replaced. Hormone replacement is possible for all hormones pituitary glands except for prolactin and oxytocin.

testes, which, of course, acts as an endocrine hormone and is essential for the production of sperm. High levels are generally seen with gonadal dysfunction (dysfunction with the testes). Lower Testosterone/LH compensated Leyding cell failure. Testosterone is a male hormone. It is the most important antigen it does a lot of things this hormone, first you can target and stimulate the sertoli cells. When testosterone levels or Dihydroxytestosterone levels are high, this will send a negative feedback to the anterior pituitary. So high testosterone levels will inhibit the release of

## Growth hormone

Growth hormone is released into the bloodstream from the anterior pituitary gland. The pituitary gland also produces other hormones which have different functions to growth hormone. Growth hormone acts on many parts of the body to promote growth in children. In adults [1], it does not cause growth but it helps to maintain normal body structure and metabolism, including helping to keep blood glucose levels within set levels.

The most frequent cause of hypopituitarism is the presence of a pituitary tumor (also known as pituitary adenoma). Pituitary [2] adenomas are almost always benign (they are not cancerous); However, they may exert pressure on the remaining part of the normal pituitary by limiting and even destroying their ability to produce hormones properly. Occasionally the pituitary adenoma produces an excess of one hormone (eg, GH or PRL), which is called hypopituitarism. Which simultaneously cause a decrease in the production of other hormones produced in the neighboring normal pituitary. In this case, the reduction of the levels of some hormones (eg hypopituitarism thyroid, adrenal and / or sex hormone dysfunction) may accompanied by excess production of other hormones. Hypopituitarism can also be the result of pituitary surgery, which damages part of the normal pituitary. It may also be due to radiation therapy which, over time, can affect the normal pituitary, even when the gland normally functions when the pituitary adenoma is

## Introduction

The pituitary gland is a small gland attached to the lower part of the brain. The term hypopituitarism refers to a loss in the production of hormones by the pituitary gland, which produces a variety of different hormones:

**ACTH:** ACTH is made in the pituitary gland and travels through the bloodstream to the adrenal glands. It stimulates the adrenals to release cortisol, a key factor in many functions in the body's metabolism of fats, carbohydrates, sodium, potassium, and protein as well as blood pressure.

**TSH:** Controls the production of thyroid hormones by the thyroid gland. Follicle-forming hormone (FSH): LH and FSH control both fertility in both sexes as well as the production of sex hormones (estrogen and progesterone by the ovaries in women and testosterone by the testicles in men). Let's talk about the hormonal regulation of the male reproductive system. So hormones are part of the endocrine system, there are many hormones that act on the reproductive system that stimulate for a gamete production. Hypothalamus is a section of the brain responsible for the production of many of the body's essential hormones, chemical substances that help control different cells and organs, we have the pituitary glands, consisting of the anterior and posterior pituitary. We are focusing on the anterior pituitary because it is the, anterior pituitary which Secretes hormones that function in the reproductive system. The important Hormones are the LH, or luteinizing hormone and FSH follicle stimulating hormone so two important. Hormones secreted by the anterior pituitary. If one of them are alternated, we have a problem of a spermatogenesis. In males, LH triggers the production of testosterone by Leydig cells in the



diagnosed. Therefore, a thorough hormonal assessment is accurate before and after surgery and / or radiotherapy on the pituitary gland.

Fertility is not guaranteed even for adults with a gland normal pituitary (10% of “normal” couples are infertile). The hypopituitarism-related infertility is the result of a deficit of LH and FSH. Sometimes if Prolactin levels are high, determines a decrease of FSH and LH. In such a particular situation, fertility can be achieved by normalizing Prolactin levels with medications such as bromocriptine or cabergoline. A great adenoma pituitary gland or bleeding may also lead to a deficit of LH and / or FSH. In such a case, the treatment (by injections) of (Analogues) of LH and FSH can stimulate the ovaries to produce eggs and testicles to produce sperm, provided they and when the ovaries and testicles are normal. The Sperm Cycle it is long in the male (above 70 days), being necessary a year or more of treatment to get a sperm count suitable for fertilizing an ovum. Therefore, it is advisable to obtain a sample of sperm and analyze it at the time of the diagnosis of pituitary problem.

If the sperm count is correct in at the time of diagnosis, sperm may be frozen for future utilization. Unfortunately the technology available for freezing ovules is still not optimal. When starting hormone replacement therapy, sometimes takes time determine the patient’s response and find the optimal dose. By therefore, the endocrinologist and the blood test. Once the optimal hormone dose is found, the patient should be evaluated every 6 months. Ideally, all symptoms of patients should be periodically confirmed blood. This is particularly important for patients who have received radiotherapy in the area of the pituitary or whole brain, since the loss of pituitary function can occur at any time.

## References

1. Ascoli P, Cavagnini F (2006) Hypopituitarism. *Pituitary* 9: 335-342. [Link: https://goo.gl/yLmmqe](https://goo.gl/yLmmqe)
2. Voutetakis A, Argyropoulou M, Sertedaki A, Livadas S, Xekouki P, et al. (2004) Pituitary magnetic resonance imaging in 15 patients with Prop1 gene mutations: Pituitary enlargement may originate from the intermediate lobe. *J Clin Endocrinol Metab* 89: 2200-2206. [Link: https://goo.gl/GxTiad](https://goo.gl/GxTiad)