Category: Reproductive medicine

Subcategory: Andrology

Oral presentation

Abstract:

THE SHAMMER OF SEMINAL PARAMETERS IN MEXICAN POPULATION: BODY FAT.

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Keywords: Andrology, Infertility, Body Fat, Teratozoospermia, Astenozoospermia.

1. **Abstract title**: THE SHAMMER OF SEMINAL PARAMETERS IN MEXICAN POPULATION: BODY FAT

2. **Study question:** Does Body Fat Percentage Disturb Seminal Parameters? A Non-Valued Perspective in Mexican Population.

3. **Study answer:** There is a tendency of increased abnormalities in seminal parameters in males with higher body fat percentage.

4. **What is known already** (100):

Obesity is one of the greatest health problems nowadays. In Mexico, prevalence is 73.0%, which is the double comparing to World Health Organization (WHO) values worldwide of 38.9%.

In andrology, obesity implies an endocrinological disorder, therefore, seminal values are affected by reactive oxygen species (ROS). Previous studies reported altered sperm motility, abnormal morphology, increased DNA fragmentation, and abnormal integrity of the acrosome in male with obesity.

Meta-analysis concluded that rich animal fat dieting increased adipose tissue, which is related with poor seminal quality, abnormal fertilization and decline in natural fertility. Thereby, adipose enzymes regulate inflammation and steroidogenesis.

5. **Study design, size and duration** (75):

Cross-sectional, descriptive study.
Sample size: N=82 patients. The total of participants were divided according to body fat percentage recommended by WHO. Group A, included 15 participants, with 15% or less body fat, and Group B, 67 participants, who presented over 15% body fat.
This was not selected by randomization; we included all the people attending our andrology lab, who met inclusion criteria and did not present exclusion criteria.
Duration from April 2021 to January 2022.

6. **Participants/materials and methods** (75)

Participants were studied using weight, height, and clinical history previous delivery of the seminal sample. We used a corporal analysis scale, Omron HBF-514LA.
The analysis was made by two certificated senior embryologists who work at the andrology laboratory. Statistical analysis was made in Microsoft Excel©
Inclusion criteria: Patients who arrived at the reproductive clinic for direct spermatobioscopy.

Exclusion criteria: Patients who denied to participate, pelvic or testicular surgery history, post vasectomy control patients.

7. **Main results** (200)

We used WHO 2021 seminal parameters references. All parameters were compared between both groups; however, we selected the most representative parameters in clinical practice: morphology and progressive motility.

The results as shown in figure 1 and 2, represent the number of cases presented in both groups with teratozoospermia and astenozoospermia. There is a tendency of disturbance on seminal parameters in higher body fat percentage, represented by individuals in Group B. These preliminary results may reflect an association between teratozoospermia and astenozoospermia; due to the design of our study it is not possible to establish a causal relation between variables.

8. **Limitations, reason for caution** (50)

As a cross sectional study, we cannot define causality, the aim of the protocol was descriptive, the number of patients was not defined by statistical manners, there is a lot of heterogeneity in our sample that we can only draw anecdotical conclusions with our analyzed population.

9. **Wider implications for the findings** (50)

Standardization of values of andrological parameters. By increasing the size of the sample, we could upgrowth diagnosing and treating male infertility. Hormonal serum levels may imply more information about the fertility status.

10. **Study funding/competing interest** (Select option)

There is no interest conflict in this study. Funding was made by the author.

11. **Trial registration number** (25)