

Is there any relation between anthropometric indices and decrease in seminal parameters?

Há relação entre os índices antropométricos e o decréscimo dos parâmetros seminais?

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ABSTRACT

Objective: To investigate the influence of anthropometric indices on seminal parameters. **Methods:** Men who underwent treatment for conjugal infertility during the period of October, 2011, to March, 2012, were randomly selected. Patients with any prior diseases related to sperm alterations were excluded. Patients were submitted to an anthropometric evaluation to obtain body mass index, and the seminal analysis was made through a spermogram. Two anthropometric methods of classification were used: body mass index (normal and altered) and abdominal circumference (<94cm and >94cm). Data were analyzed by statistical tests. **Results:** The group with the altered body mass index presented lower volumes of ejaculated volume and a larger percentage of patients with abdominal circumference <94cm presented with progressive forms of spermatozoa below reference values. However, in the statistical tests, there was no significant difference. **Conclusion:** No significant difference was found in the sperm quality relative to the body mass index or abdominal circumference.

Keywords: Adiposity; Male infertility; Body mass index; Semen; Reproduction

RESUMO

Objetivo: Investigar a influência dos índices antropométricos em parâmetros seminais **Métodos:** Foram selecionados de maneira aleatória homens que procuraram tratamento para infertilidade conjugal durante o período de outubro de 2011 até março de 2012. Foram excluídos os pacientes com quaisquer doenças relacionadas a alterações espermáticas prévias. Os pacientes passaram por avaliação antropométrica para obtenção do índice de massa corporal, e a análise seminal foi feita por meio de espermograma. Foram utilizados dois métodos de classificação antropométrica: índice de massa corporal (normal e alterado) e circunferência abdominal

(<94cm e >94cm). Os dados foram analisados por meio de teste estáticos. **Resultados:** O grupo com índice de massa corporal alterado apresentou menores valores de volume de ejaculado, e uma fração maior de pacientes com circunferência abdominal <94cm apresentou formas progressivas de espermatozoide abaixo dos valores de referência. No entanto, nos testes estatísticos, não houve diferença significativa. **Conclusão:** Não foi encontrada diferença significativa na qualidade espermática em relação ao índice de massa corporal ou à circunferência abdominal.

Descritores: Adiposidade; Infertilidade masculina; Índice de massa corporal; Sêmen; Reprodução

INTRODUCTION

Obesity is a severe health problem observed in the entire world.⁽¹⁾ Approximately 1.6 billion adults (aged over 15 years) are classified as being overweight (body mass index – BMI – between 25 and 30kg/m²) and 400 million as obese (BMI ≥30kg/m²).⁽¹⁾ The weight of Brazilians has also been increasing over the last years. Data from the Research on Family Budgets (POF, acronym in Portuguese for *Pesquisa de Orçamentos Familiares*) applied by the Brazilian Institute of Geography and Statistics (IBGE) in a partnership with the Ministry of Health showed that during the period between 2008 and 2009, excess weight already affected half of Brazilians, regardless of gender.⁽²⁾ Obesity is an important health risk factor and is associated with high morbidity and mortality, especially due to cardiovascular diseases^(3,4) and diabetes.⁽⁵⁾ It is also associated with other diseases, such as cancer⁽⁶⁾ and non-communicable

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