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Original article

Male infertility profile in an assisted human reproduction clinic from the south of Santa Catarina, Brazil, from 2012 to 2014

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ABSTRACT

Introduction: Male infertility is characterized by the inability to produce sperm with normal concentration, motility and/or morphology, featuring an abnormal spermatogenesis. The diagnosis of male infertility is accomplished through spermogram.
Objectives: The present study aimed to verify the profile of male infertility of patients attended in an assisted human reproduction clinic.
Methods: We assessed the spermogram report of 196 patients who underwent semen analysis in a private clinic of assisted human reproduction, located in the south of the state of Santa Catarina (Brazil), from 2012 to 2014.
Results: 32.7% of patients presented normal semen analysis, while 67.3% had some alteration in the report. Among the altered semen, the following diagnoses were found: teratozoospermia (44.7%), oligoasthenoteratozoospermia (20.5%), oligoteratozoospermia (15.9%), azoospermia (7.6%), asthenoteratozoospermia (6.8%), oligozoospermia (2.3%) and asthenozoospermia (2.3%). It was also showed that the sperm volume was modified with advancing age, showing a significant decrease in individuals over 40 years old.
Conclusions: our data revealed teratozoospermia as the most frequent sperm alteration found. Moreover, patients aged greater than or equal to 40 years old presented reduced sperm volume, although the patients' age did not show correlation with the final diagnosis of the sperm analysis.

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Perfil da infertilidade masculina em uma clínica de reprodução humana assistida do extremo sul catarinense no período de 2012 a 2014

Palavras-chave:
Infertilidade masculina
Esperma
Espermograma
Espermatozoides

RESUMO

Introdução: A infertilidade masculina é definida pela incapacidade de formar espermatozoides com concentração, morfologia ou motilidade normal, caracterizando uma espermatogênese anormal. O diagnóstico de infertilidade masculina pode ser realizado por meio do espemograma.
Objetivos: O presente estudo buscou verificar o perfil da infertilidade masculina em uma clínica de reprodução humana assistida.
Métodos: Foram avaliados os laudos de 196 pacientes submetidos ao espermograma em uma clínica particular de reprodução humana assistida, localizada no extremo sul catarinense, no período de 2012 a 2014.
Resultados: 32,7% dos pacientes apresentaram resultados dentro da normalidade, enquanto que 67,3% apresentaram algum tipo de alteração no espermograma. Entre os exames alterados, os seguintes diagnósticos foram encontrados: teratozoospermia (44,7%), oligoastenoteratozoospermia (20,5%), oligoteratozoospermia (15,9%), azoospermia (7,6%), astenoteratozoospermia (6,8%), oligozoospermia (2,3%) e astenozoospermia (2,3%). Além disso, foi demonstrado que o volume espermático é alterado com a idade, sendo observada uma redução significativa em indivíduos com mais de 40 anos.
Conclusões: nossos resultados revelaram a teratozoospermia como a alteração seminal mais frequente na população estudada. Além disso, pacientes com idade maior ou igual a 40 anos apresentaram o volume espermático reduzido, embora a idade dos pacientes não se correlacione com o diagnostico final do espermograma.

Introduction

Infertility is defined as the inability of a sexually active couple, without the use of contraceptive methods, to obtain a pregnancy within one year. It is an important pathological condition that affects around 8–15% of couples regardless of socioeconomic and cultural factors. Moreover, it is not characterized as a permanent disability to have children.[1]

The male infertility, in turn, is characterized by the failure to produce sperm with regular concentration, morphology and/or motility, consisting in an abnormal spermatogenesis.[2–4] Lately, the correlation of males' age and infertility has been extensively studied. Recent researches have shown that the higher the paternal age, more likely to have disorders of production and quality of the sperm.[5] According to Telõken, Badalotti and Palka (1999), there isn't an age threshold to the male fertility, although a decrease can be seen since 40 years old.[6] In addition, factors like urogenital infection, exposure to toxics substances and vascular diseases can contribute to changes in the seminal parameters, having many consequences as: difficulties in the embryo formation, increased risk of early pregnancy loss and a higher probability to develop genetic syndromes or other diseases.[5] Thus, it is important to note that male infertility is multifactorial, presenting manyetiologies.[7]

As the first choice test, the semen analysis, although not sophisticated, is used to determine if a seminal sample are in accordance with WHO (World Health Organization) reference values.[4] The diagnostic of male infertility depends on a descriptive evaluation of the ejaculate, with emphasis in the concentration, motility and morphology of the sperm, being these parameters of great clinical relevance. The changes detected in the semen analysis include: azoospermia, total absence of spermatozoa in the ejaculate; oligozoospermia, reduced number of sperm; teratozoospermia, presence of abnormal morphologies in the sperm; asthenozoospermia, low sperm motility and; necrozoospermia, high percentage of immotile spermatozoa.[4,8] In some cases, a combination of two or more alternations is found.[9]

Considering that only few data about male infertility in the south of Santa Catarina are available, the present study aimed to assess the male infertility profile in a private human assisted reproduction clinic from 2012 to 2014.

Materials and methods

Experimental design and data collection

To evaluate the profile of male infertility, data from the spermogram reports were collected in a private human assisted reproduction clinic in Criciúma, Santa Catarina (Brazil), which attends patients from that city and from neighboring towns. Only data from patients who carried out the semen analysis in the studied clinic and issued from 2012 to 2014 were included in the. In addition to the quantitative and qualitative features found in the sperm analysis is, the patients' age was evaluated.