OH&RM ONE HEALTH & RISK MANAGEMENT

Supplement, VOL. 2, ISSUE 4
2021

THE LINK BETWEEN INFERTILITY AND WEIGHT. GENDER DIFFERENCES

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Keywords: *infertility, fecundability, obesity.*

Introduction. Infertility is defined as a couple's inability to conceive after one year of frequent, unprotected intercourse. In the case of women that are older than 35, the period is shortened to 6 months. In spite of relatively unchanged rates of infertility, assisted infertility is in substantially more demand. This phenomenon could be explained by the delay of childbearing to a later age. The factors that play a considerable effect in this issue include: age, conditions that can be of acute or chronic nature, exposure to environmental and occupational toxins, poor lifestyle choices, infectious and genetic diseases, and specific reproductive disorders that can affect either the man or woman attempting to conceive.

Material and methods. This paper analyzes the major aspects of this topic published and were based on 50 bibliographic sources of authors across the country and abroad using Academic Google and PubMed databases (France, USA, Italy, Norway, Germany Republic of Moldova etc.).

Results. The prevalence of obesity has risen steadily in the past decades and it has been identified as a contributor to male infertility for the reason that it leads to a decline in semen parameters. A 2010 study identified a significant positive correlation between increased body mass index (BMI) and deficiency of sperm cells in semen. Not only that but also correlation with abnormal sperm morphology, LH, serum leptin while also a significant negative correlation with sperm concentration, sperm motility and serum T. In the same year another study was published that did not find statistically significant correlation between BMI and semen quality in subfertile couples. Two years later two semen parameters were found to be detrimentally affected by a high BMI and central adiposity: sperm concentration and total motile sperm count. Consistent results were reported by researchers from France: Semen volume, semen concentration, total sperm count and progressive motility were found to be decreased in males with increased BMI. In females both overweight and obese BMIs have been associated with decreased fertility. The pathophysiology involved regards ovulatory dysfunction and metabolic changes. A 2016 study with the goal to evaluate the association between adiposity, physical activity, and fecundability concluded that decreased fertility was associated with various measures of overall and central adiposity. Higher waist-to-hip ratios and circumferences were associated with lower fecundability. The same effect was observed in individuals that presented a tendency to gain weight in the chest/shoulders and waist/stomach relative to hips/thighs. The detrimental effects obesity has on ovulatory function been known in 1994, changes being observed in moderately overweight as well as underweight women. Insulin resistance that results in hyperinsulinemia may, though this is not a rule, lead to hyperandrogenism, which causes the known triad of hirsutism, dysfunctional uterine bleeding, and infertility.

Conclusions. While not extensively studied the correlation between male obesity and infertility has yielded conflicting results that need further study. Weight reduction can correct the hormonal imbalance but the effect of weight loss on semen parameters and pregnancy rate has not been studied. Evidence points at the detrimental effects obesity has on female fecundability and on the health of the offspring. Thus, women and men who wish to conceive are counseled about the importance of achieving and maintaining a normal weight.