

CONTRACEPTION IN AN INDIVIDUAL WITH MORBID OBESITY: A CASE REPORT

ANTICONCEPÇÃO EM PORTADORA DE OBESIDADE MÓRBIDA: RELATO DE CASO

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ABSTRACT

Introduction: Obese women are part of a rapidly growing segment of the population, deserving special consideration in their counseling and management of contraception. Obesity is associated with serious long-term health outcomes. Therefore, the use of a safe and effective contraceptive is essential. Thus, the purpose of this report was to show the best contraceptive method for women with morbid obesity. **Case Report:** A 32-year-old woman, Body Mass Index (BMI) 48.8 kg/ m², using a male condom as the only form of contraception, denies morbidities and smoking, reports social alcohol habit, had a single gestation, cesarean delivery, searched Dr. Carlos Teixeira Brandt Clinical School of the Medical School - Olinda to choose the ideal contraceptive for her current situation. In the face of the anamnesis and physical examination, the conduct was the referral for bariatric surgery, as well as to follow the guidelines on contraceptive methods, whose choice was the copper intrauterine device (CIUD). **Comments:** In view of the uncertainties regarding the efficacy of contraceptive methods in women with morbid obesity, the risks offered and the patient's willingness to use a long-term reversible method, it was suggested to use CIUD, which, besides being available in the public health network, has no evidence of decreased effectiveness due to the increase in the BMI.

Keywords: Anticonception; Morbid obesity; Risks; Effectiveness; Intrauterine device

RESUMO

Introdução: Mulheres obesas fazem parte de uma população que vem crescendo rapidamente, merecendo consideração especial em seu aconselhamento e manejo quanto à contracepção. A obesidade está associada a graves desfechos de saúde a longo prazo. Assim, o uso de contraceptivo seguro e efetivo nessa população é essencial. Desse modo, pretende-se relatar qual o melhor método contraceptivo para mulheres com obesidade mórbida. **Relato de Caso:** Mulher, 32 anos, índice de massa corporal (IMC) 48,8 kg/m², em uso de preservativo masculino como única forma de contracepção. Nega morbididades e tabagismo. Relata etilismo social. Teve única gestação, parto cesariano, procurou a Clínica Escola Dr. Carlos Teixeira Brandt da Faculdade de Medicina de Olinda para escolha de contraceptivo ideal na situação atual. Diante da anamnese e do exame físico, a conduta foi o encaminhamento para cirurgia bariátrica, além de orientações sobre os métodos anticoncepcionais, cuja escolha foi o dispositivo intrauterino (DIU) de cobre. **Comentários:** Diante das incertezas sobre a eficácia de métodos contraceptivos em mulheres com obesidade mórbida, dos riscos oferecidos e da vontade da paciente de um método reversível de longa duração, foi sugerido o uso do DIU de cobre, que além de disponível na rede pública, não tem evidências de diminuição da efetividade devido ao aumento do IMC.

Palavras-chave: Anticoncepção; Obesidade mórbida; Riscos; Eficácia; Dispositivo intrauterino

INTRODUCTION

Obesity and its comorbidities have reached epidemic rates among women of reproductive age, and most of them wish to use contraceptives, which must meet specific requirements¹⁻⁴.

Pregnancy in obese women is associated with significant risk factors, such as gestational diabetes mellitus (GDM) and hypertensive disorders of pregnancy (HDP). Excess weight increase the risk of glucose intolerance in pregnant women, leading to a higher incidence of GDM. This condition is more common after the 20th week of gestation and increases the likelihood of traumatic delivery due to fetal macrosomia. HDP occurs more often in the last trimester of pregnancy and is associated with maternal and neonatal mortality⁵⁻⁸. Besides the maternal risks, obesity has also been linked to increased neonatal morbidity, including birth injury, lower Apgar scores, respiratory distress syndrome, bacterial sepsis, neonatal seizures, and hypoglycemia.

Obese women require special attention in contraceptive counseling and management because several hormonal methods increases the risk of morbidities to which they are predisposed, such as coronary artery disease, stroke, and thromboembolism^{1,3,9}. Another relevant factor is the difference in metabolism and pharmacokinetics in obese women, which may render certain methods less effective in preventing pregnancy. Pharmacokinetic alterations related to obesity can be attributed to changes in physiological factors, such as plasma proteins, drug-metabolizing enzymes and transporters, adipose tissue and lean body mass, organ mass, cardiac output, and splanchnic blood flow¹. The three main pharmacokinetic aspects altered by obesity are drug distribution, metabolism, and excretion¹. Moreover, morbidly obese women may experience drug-drug interactions, including with oral contraceptives¹.

Clinical trials on contraception have excluded obese women, causing uncertainty regarding the contraceptive efficacy of certain methods, making it crucial to select a safe option with high effectiveness for this population¹⁰. In this context, based on scientific evidence and established knowledge, this study aimed to identify the most appropriate method for obese women and to provide recommendations re-

garding the management of morbidly obese patients treated at the Dr. Carlos Brandt Teaching Clinic of the Faculdade de Medicina de Olinda.

CASE REPORT

K.M.F.A.A., 32 years old, female, white, body mass index (BMI) of 48.8 kg/m², attended the Dr. Carlos Teixeira Brandt Teaching Clinic of the Faculdade de Medicina de Olinda to choose the most appropriate contraceptive method for her current situation. She used male condoms as her only form of contraception. Menarche occurred at age 11, with regular menstrual cycles. She had one pregnancy, delivered by cesarean section. She denied smoking and reported alcohol consumption twice a week. Based on the anamnesis and physical examination, the management included referral for bariatric surgery, along with counseling on contraceptive methods, with the chosen method being the copper intrauterine device (IUD).

COMMENTS

Since obesity associated with pregnancy poses significant risks for women, the ideal contraceptive must provide safety regarding efficacy and protection against unintended pregnancy⁵⁻⁸. A cohort study on contraceptives conducted in the United States demonstrated the superior effectiveness of long-acting reversible contraception (LARC), which provides at least three years of continuous protection against pregnancy once inserted. The use of LARC is associated with lower failure rates, higher acceptance and continuation rates, reducing the likelihood of unintended pregnancy and all related complications^{10,11}.

LARC methods include the copper IUD, the levonorgestrel IUD, and the subcutaneous implant, all classified as category 1 (no restriction to the use of the method) according to the World Health Organization medical eligibility criteria for contraceptive use in patients with a BMI > 30 kg/m². Furthermore, the literature shows no evidence that increased BMI affects the effectiveness of these methods^{1,3}. Of these methods, the copper IUD is the only one provided by the public health system due to its lower cost, making it the preferred option for the patient.

REVIEW ARTICLES

Obesity entails an increased risk for numerous diseases¹, which begin to rise with a BMI above 25 kg/m² and become concerning when BMI exceeds 35 kg/m². The incidence of sudden death in patients with morbid obesity, without an autopsy-determined etiology, may be up to 40 times higher in this group than in the general population¹². Therefore, as a general health measure and to ensure a future pregnancy without obesity-associated risks, the patient was referred for bariatric surgery², since she met one of the indication criteria: “Patients over 18 years old with BMI \geq 40 kg/m²”, outlined in the Resolution No. 1942/2010 of the Federal Council of Medicine.

REFERENCES

1. Stanczyk FZ, Burke AE, Hong KM, Archer DF. Morbid obesity: potential effects of hormonal contraception. *Contraception*. 2018; 98(3):174-180. doi: 10.1016/j.contraception.2018.03.008.
2. Mengesha BM, Carter JT, Dehlendorf CE, Rodriguez AJ, Steinauer JE. Perioperative pregnancy interval, contraceptive counseling experiences, and contraceptive use in women undergoing bariatric surgery. *Am J Obstet Gynecol*. 2018; 219(1):81.e1-81.e9. doi: 10.1016/j.ajog.2018.04.008.
3. Morse JE, Pathak PR. Contraceptive care of obese woman. *Obstet Gynecol Surv*. 2018; 73(1):56-66. doi: 10.1097/OGX.0000000000000523.
4. Graham YN, Mansour D, Small PK, Hinshaw K, Gatiss S, Mahawar KK, McGarry K, Wilkes S. A survey of bariatric surgical and reproductive health professionals knowledge and provision of contraception to reproductive-aged bariatric surgical patients. *Obes Surg*. 2016; 26(8):1918-23. doi: 10.1007/s11695-015-2037-4.
5. Yang Z, Phung H, Freebairn L, Sexton R, Rauli A, Kelly P. Contribution of maternal over weight and obesity to the occurrence of adverse pregnancy outcomes. *Aust N Z J Obstet Gynaecol*. 2018; doi: 10.1111/ajo.12866.
6. Nassr AA, Shazly SA, Trinidad MC, El-Nashar SA, Marroquin AM, Brost BC. Body fat index: A novel alternative to body mass index for prediction of gestational diabetes and hypertensive disorders in pregnancy. *Eur J Obstet Gynecol Reprod Biol*. 2018; 228:243-48. doi: 10.1016/j.ejogrb.2018.07.001.
7. Antza C, Cifkova R, Kotsis V. Hypertensive complications of pregnancy: A clinical overview. *Metabolism*. 2018; 86:102-11. doi: 10.1016/j.metabol.2017.11.011.
8. Wang L, Leng J, Liu H, Zhang S, Wang J, Li W, Li W, Li N, Zhang T, Baccarelli AA, Hou L, Yang X, Yu Z, Hu G. Association between hypertensive disorders of pregnancy and the risk of postpartum hypertension: a cohort study in women with gestational diabetes. *J Hum Hypertens*. 2017; (11):725-30. doi: 10.1038/jhh.2017.46.
9. Hubacher D, Spector h, Monteith C, Chen PL, Hart C. Long-acting reversible contraceptive acceptability and unintended pregnancy among women presenting for short-

acting methods: a randomized patient preference trial. *Am J Obstet Gynecol*. 2017; 216(2):101-9. doi:10.1016/j.ajog.2016.08.033.

10. Rocha ALL, Campos RR, Miranda MMS, Raspante LBP, Carneiro MM, Vieira CS, Reis FM. Safety of hormonal contraception for obese women. *Expert Opin Drug Saf*. 2017; 16(12): 1387-93. doi: 10.1080/14740338.2018.1389893.
11. Bhuva K, Kraschnewski JL, Lehman EB, Chuang CH. Does body mass index or weight perception affect contraceptive use? *Contraception*. 2017; 95(1):59-64. doi: 10.1016/j.contraception.2016.09.003.
12. Sadeghi M, Soleimani A, Roohafza H, Yazdekhasti S, Oveisgharan S, Talaei M, Sarrafzadegan N. Cardiovascular disease events and its predictors in women: Isfahan Cohort Study (ICS). *J Carciovasc Thorac Res*. 2017;9(3):158-63. doi: 10.15171/jcvtr.2017.27.