

Case Report

Huge pseudodecidual reaction after oral contraceptive treatment

Aylin Saglam¹, Funda Gode², Recep Bedir³, Burcu Kasap^{4,*}

¹ Obstetrics and Gynecology Clinic, Rize Medical Center, Rize, Turkey

² Obstetrics and Gynecology Clinic, Irenbe Medical Center, Izmir, Turkey

³ Department of Pathology, Recep Tayyip Erdogan University, Rize, Turkey

⁴ Department of Obstetrics and Gynecology, School of Medicine, Mugla Sitki Kocman University, Mugla, Turkey

Abstract

Combined oral contraceptives (COCs) are the most frequently chosen treatment option in abnormal uterine bleeding. The COCs currently in use, containing small dosages of estrogen and progesterone, produce an arrest of endometrial glandular proliferation during the first cycles. Also the combination of inactive glands, abortive secretion and thin blood vessels are characteristics of COCs therapy effect. Here we report a case describing heavy vaginal bleeding and the passing of a large sized piece of tissue due to the use of COCs. Although there are cases that report pseudodesidualized endometrium after taking medroxyprogesterone acetate (MPA) or levonorgestrel-releasing intrauterine system (LNG), COCs related any mass like huge pseudodecidual reaction has not been described in literature so far. In this case, pelvic imaging and endometrial sampling had not been performed prior to commencing medical therapy. However the use of out-patient techniques such as endometrial sampling and/or hysteroscopy is indicated in abnormal uterine bleeding cases to exclude other intrauterine pathology before starting any treatment options.

Key words:

Pseudodecidual reaction, abnormal uterine bleeding, estrogen, oral contraceptive, progesterone

Introduction

Menstrual disorders are the most common gynecologic conditions in the general population [1]. Abnormal uterine bleeding (AUB) can mean both heavy and irregular menstrual bleeding, and many patients experience the combination of these symptoms [2]. The substantial impact of AUB lies not only in its prevalence, but its affect on quality of life, associated loss of productivity, and major health care costs [3–4]. Deciding on the best medical therapy for AUB can be quite challenging because of the numerous available treatment options [5]. Physiologically it makes sense that combined oral contraceptives (COCs), the most frequently chosen treatment option in this study, should effectively

reduce menstrual bleeding. Combined oral contraceptives consist of estrogen and progestogen components. Recent years have seen further reductions in the EE dose, to 20 µg and even 15 µg. However, these low doses have been associated with higher rates of discontinuation from clinical trials (mainly due to adverse events including bleeding) and bleeding disturbances (amenorrhea/infrequent bleeding, irregular, prolonged or frequent bleeding or spotting) compared with higher doses of EE [6]. In particular, preparations containing EE 15 µg have a somewhat higher incidence of breakthrough bleeding and/or spotting than COCs containing EE 20 µg [7], and may be associated with premature discontinuation because of bleeding irregularities [8]. The COCs currently in use, containing small dosages of estrogen and progesterone, produce an arrest of endometrial glandular proliferation during the first cycles. The combination of inactive glands, abortive secretion and thin blood vessels are characteristic for COCs therapy effect. The progesteron effect dominates over the estrogen effect [9]. Although there are cases that report pseudodecidualized endometrium after taking MPA or LNG, COCs re-

Article history:

Received 20 12 2014

Accepted 21 04 2015

* Correspondence: Burcu Kasap, MD

Department of Obstetrics and Gynecology, School of Medicine, Mugla Sitki Kocman University, Mugla, 48000, Turkey

Phone: +90 (252) 2114800/5156

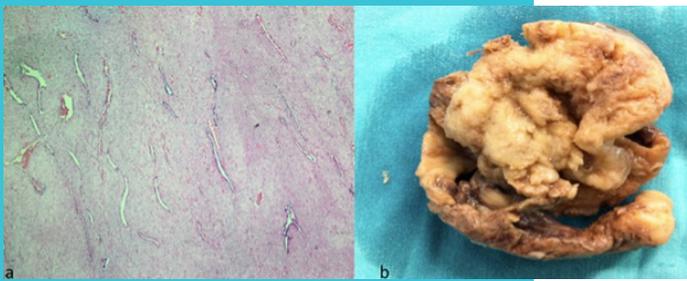
Email: burcuharmandar@gmail.com

lated any mass like huge pseudodecidual reaction has not been described in literature so far. Herein we present a rare case of pseudodecidual reaction after COC use.

Case presentation

A 45-year-old multiparous woman presented with heavy vaginal bleeding. Her gynecologist had given her the combined oral contraceptive pill (COCs) for the past three months because her periods were irregular. The woman reported that she thought she was having a miscarriage due to the appearance of the tissue that she had passed. She described it as tissue resembling a fetus. The macroscopic appearance of the tissue that she brought with her was indistinguishable from a 11 – 12 weeks gestation size placenta. The size of the tissue was 8x5x3 cm (Figure 1a).

Figure 1.



Progesterone effect, decidual pattern; marked decidual changes in the stroma and small inactive glands lined by a single layer of epithelium (a) and macroscopic appearance of the tissue (8x5x3cm) (b)

It was fixed in 10% formalin and sent for histology. On admission the woman was not tachycardic and had a normal blood pressure. Her beta-human chorionic gonadotropin (BhCG) was negative and her hemoglobin level was 11.0 g/dl. On vaginal examination there was no active bleeding. Transvaginal ultrasound showed an empty uterus. An endometrial biopsy was carried out to evaluate the endometrial histology. The histology showed pseudodecidualization of the endometrium. The microscopic examination showed glands with secretory exhaustion surrounded by abundant decidualized stroma. Small ectatic vessels were present in the superficial portions of the endometrium (Figure 1b).

Discussion

Oral contraceptive pills produce pseudodecidualized endometrium, a condition that may apply to ectopic pregnancies as well as eutopic endometrium. The mechanism of action is not clearly understood, but it may involve suppression of cell proliferation and enhancement of programmed cell death or apoptosis [10]. The morphologic appearance of the endometrium following progesterone therapy is variable and depends on the underlying status of the endometrium, as well as the dose potency and duration of progesterone therapy [11]. The endometrial tissue is a sensitive target for steroid hormones and is able to modify its structural characteristics. COCs exert a predominant progestational effect on the endometrium, inducing arrest of glandular proliferation, pseudosecretion, and stromal edema followed by decidualized stroma with granulocytes and thin sinusoidal blood vessels. Early in COCs therapy, there is stromal edema, followed later by a decidual reaction and granulocytic infiltrates. Prolonged use of COCs results in the disappearance of the abortive glandular secretion and in atrophy of both glands and stroma; occasionally, an abundant stroma and ectatic blood vessels can be found [9]. For perimenopausal women, irregularity of their periods is extremely common. Although there are cases that report pseudodecidualized endometrium after taking MPA or LNG, we have not found any case reports describing heavy vaginal bleeding and the passing of a large sized piece of tissue due to the use of COCs as in this case. Any new pattern of bleeding after amenorrhea or a persistence of heavy bleeding may be due to co-existing intrauterine pathology such as endometrial polyps, endometrial hyperplasia or endometrial cancer. In this case, pelvic imaging and endometrial sampling had not been performed by the gynecologist prior to commencing medical therapy. The use of out-patient techniques such as endometrial sampling and/or hysteroscopy is indicated in these instances to exclude other intrauterine pathology [12]. If periods become heavy and irregular or there is intermittent or postcoital bleeding, further investigation is advised.

Conflict of Interest

Authors declare no conflict of interest

References

1. Kjerulff KH, Erickson BA, Langenberg PW. Chronic gynecological conditions reported by US women: findings from the National Health Interview Survey, 1984 to 1992. *Am J Public Health.* 1996;86:195–9.
2. Lobo RA. Abnormal Uterine Bleeding: Ovulatory and anovulatory dysfunctional uterine bleeding, management of acute and chronic excessive bleeding 2007. In: Katz VL, Lentz GM, Lobo RA, Gershenson DM, editors. *Comprehensive Gynecology.* Philadelphia, PA: Mosby Elsevier; 2007. pp. 915–31.
3. Cote I, Jacobs P, Cumming DC. Use of health services associated with increased menstrual loss in the United States. *Am J Obstet Gynecol.* 2003;188:343–8.
4. Frick KD, Clark MA, Steinwachs DM, Langenberg P, Stovall D, Munro MG, Dickersin K, and the STOP-DUB Research Group. Economic burden of dysfunctional uterine bleeding among women agreeing to obtain surgical treatment. *Women's Health Iss.* 2009;19:70–8.
5. Rahn DD, Abed H, Sung VW, Matteson KA, Rogers RG, Morrill MY, Barber MD, Schaffer JI, Wheeler TL, 2nd, Balk EM, Uhlig K. for the Society of Gynecologic Surgeons—Systematic Review Group. Systematic review highlights difficulty interpreting diverse clinical outcomes in abnormal uterine bleeding trials. *J Clin Epidemiol.* 2011;64:293–300.
6. Gallo MF, Nanda K, Grimes DA, Schulz KF. 20 meg versus >20 megestrogen combined oral contraceptives for contraception. *Cochrane Database Syst Rev.* 2008;8:CD003989
7. Gestodene Study Group 324. Cycle control, safety and efficacy of a 24-day regimen of gestodene 60 microg/ethinylestradiol 15 microg and a 21-day regimen of desogestrel 150 microg/ethinylestradiol 20 microg. *Eur J Contracept Reprod Health Care.* 1999;4:17–25.
8. Gestodene Study Group 32. The safety and contraceptive efficacy of a 24-day low-dose oral contraceptive regimen containing gestodene 60 microg and ethinylestradiol 15 microg. *Eur J Contracept Reprod Health Care.* 1999;4:9–15.
9. Liane Deligdisch, M.D. Hormonal pathology of the endometrium. *Mod Pathol.* 2000;13:285–94.
10. Rees M, Hope S, Ravnkar V. The abnormal menstrual cycle. 2005; ISBN:184214212
11. Deligdisch L. Hormonal pathology of the endometrium. *Mod Pathol.* 2000. 13:285–94.
12. Brechin S, Cameron ST, Peterson AM, Williams AR, Critchley HO. Intrauterine polyps - a cause of unscheduled bleeding in women using the levonorgestrel intrauterine system: *Hum Reprod.* 2000;15:650–2.