

Management of hematometocolpos due to dysfunctional uterine bleeding following progestin use: a case report

**Murat Bakacak¹, Fazil Avci¹, Mehmet Suhha Bostanci², Zeyneb Bakacak³,
Salih Serin¹, Onder Ercan¹, Bulent Kostu¹**

¹Department of Obstetrics and Gynecology, Sutcu Imam University Faculty of Medicine, Kahramanmaras, Turkey;

²Department of Obstetrics and Gynecology, Sakarya University Training and Research Hospital, Sakarya, Turkey;

³Private Caka Vatan Hospital, Kahramanmaras, Turkey

ABSTRACT

Hematometocolpos is accumulation of blood in the vagina and uterine cavity due to intra-uterine hemorrhage. A 20-year-old female presented to our clinic with massive menorrhagia at menarche after progestin usage. Hematometocolpos was detected by transabdominal ultrasonography. She was pale because of heavy bleeding for 5 days and hemoglobin level was measured as 5.1 g/dl. Initial treatment was blood transfusion and medical drug therapy. After resolution of the hematometocolpos was shown by transabdominal ultrasound 2 days later, the patient, who was stable, was discharged without complication. Obstruction of the female genital outflow tract is rarely seen. Hematocolpos has been reported in elderly women following vaginal occlusion due to radiotherapy, vaginal fibroma and labial synechiae causing infection or inflammatory conditions. The case is presented here because of the successful management of hematometocolpos due to massive dysfunctional uterine bleeding in a young virgin patient.

Key words: Hematocolpos, pelvic mass, progestin

Heavy menstrual bleeding (HMB) is a general problem with prevalence rates of more than 30% among adolescents who consult gynaecologists [1, 2, 3]. In a study of 153 girls aged 12-19 years with bleeding disorders, those who presented with HMB at menarche and those who required hospitalization were reported at rates of 90% and 12%,

respectively [3]. In addition, it is very important to understand the difference between non-life-threatening bleedings and those requiring emergent intervention [4]. Therefore, a careful anamnesis, and physical examination are essential for diagnosis and management. Uterine bleedings due to obstruction of the lower female genital tract cause proximal dil-

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Correspondence: Murat BAKACAK, Kahramanmaras Sutcu Imam Universitesi Tıp Fakultesi, Kadın Hastalıkları ve Doğum Anabilim Dalı, Kahramanmaras, Turkey.

Tel: +90 344 - 280 10 00 e-mail: muratbakacak46@gmail.com

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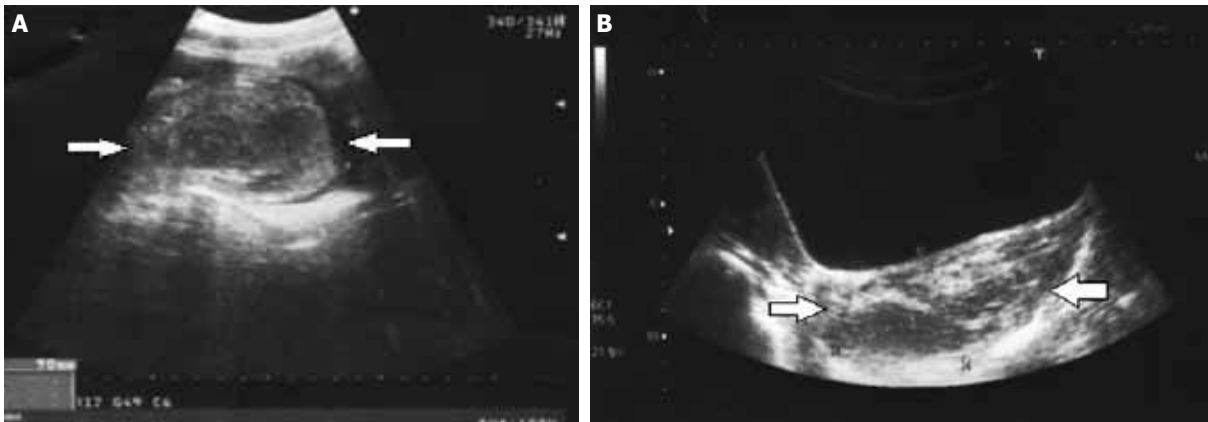


FIGURE 1. (A) Transabdominal sagittal ultrasonographic view showing the markedly distended uterus. Heterogeneous structures the largest being 90 mm in diameter were seen in the uterine cavity. (B) Transabdominal sonographic view showing the markedly distended vagina measuring 88.9 mm x 39.2 mm (hematocolpos). Heterogeneous structures the largest being 90 mm in diameter were seen in the vaginal cavity.

ation and the occurrence of hematocolpos, hematotrachelos or hematometra are the most common problems defined as congenital abnormalities [4, 5, 6]. Obstruction of the female genital outflow tract is rare [7, 8].

The case is presented here because of successful management of hematometrocolpos due to massive dysfunctional uterine bleeding in a young virgin patient.

CASE REPORT

A 20-year-old virgin patient with an episode of massive menorrhagia at menarche was admitted to the Emergency Room (ER) of the Department of Obstetrics and Gynecology. Her medical history revealed that 15 days prior to the presentation at the Emergency Department, she had been prescribed a ten-day course of progestogen therapy on request to delay her menstrual cycle. She had no known bleeding disorders. Her gynecological history included menarche at 14 years of age. Her periods lasting for 6 to 7 days were normal and regular occurring at 25-day intervals. On examination, she was afebrile with blood pressure of 70/40 mm Hg and pulse rate of 130 beats per minute. Her abdomen was soft, with moderate tenderness of the lower abdomen without rebound. Pelvic examination revealed an intact annular hymen. The hymenal opening was 7-8 mm in

diameter. Coagulated blood bulging outwards from the hymen opening was observed. A large hematometra and hematocolpos were detected by transabdominal ultrasound scanning. Transabdominal ultrasound depicted a distended uterus 90 mm in diameter (Figure 1a) which communicated with a markedly distended vagina (Figure 1b). Both ovaries were observedly normal. She had been bleeding heavily for 5 days causing a drop in hemoglobin level down to 5.1 gr/dl, while other laboratory test results were unremarkable. Pregnancy test was negative. She was initially treated with blood transfusion (eight units of packed red blood cells and four units of packed fresh-frozen plasma were transfused) and hemostasis was achieved rapidly using high doses of combined oral contraceptive (ethinyl estradiol 0.02 mg, and gestodene 0.075 mg) twelve times a day, tranexamic acid 1000 mg q.i.d., and naproxen sodium 550 mg b.i.d. After one day, a chocolate-like fluid started to spill out from the vagina. A transabdominal ultrasound obtained 2 days later showed resolution of the hematometrocolpos. The patient was discharged without complication.

DISCUSSION

Congenital abnormalities resulting in hematometrocolpos include imperforate hymen, a complete transverse vaginal septum, vaginal and, rarely, cervical atresia [7, 8, 9]. Acquired obstruction of the

lower female genital tract is rare. These acquired problems are caused by iatrogenic interventional traumas to the uterine cervix such as cone biopsies, loop electrosurgical procedures, dilation and curettage, obstetric lacerations, cervical or endometrial carcinoma, and radiation therapy [9, 10, 11, 12, 13, 14]. Spontaneous obstruction is generally uncommon but has been reported recently [15]. Firstly, pregnancy and pregnancy-related complications need to be excluded from the patient's medical history [1]. About one fifth of females presenting with heavy menstrual periods may have an underlying blood dyscrasia [2, 15, 16, 17]. HMB may be associated with a variety of endocrine disorders such as thyroid disease, adrenal problems and other medical problems such as hepatitis, chronic renal disease or diabetes mellitus. In addition, HMB episodes may occur because of disruptions or abnormalities of the coagulation cascade [1].

In the present case, sonographic findings demonstrated acquired obstruction of the lower female genital tract, specifically hematometra and hematocolpos. The intracavitary findings included different degrees of resolving hemorrhage, but a malignancy, although less likely, could not be ruled out. However, presenting symptoms of hematometra and hematocolpos without any evidence of primary and secondary amenorrhea were considered to be related to massive uterine bleeding following the use of progestin fifteen days previously. In the present case, it was thought that massive uterine bleeding could have caused an obstruction secondary to the clot formation. Narrow diameter of the hymenal opening may have facilitated this process. With medical therapy, the patient's clinical symptoms improved, uterine and vaginal bleeding stopped and coagulated blood in the vagina dissolved and drained from the vagina.

As in the present case, abnormal uterine bleeding associated with the use of exogenous steroids, systemic or local agents is classified as "iatrogenic" according to the PALM-COEIN classification system [18].

There are some effective treatment methods for adolescents with HMB. Planning is very important in the treatment of both acute bleed and its maintenance therapy. It is generally recommended that adolescents with active HMB and hemoglobin of less than 8 mg/dl should be admitted into ER dur-

ing an acute bleed [5, 19].

Intravenous crystalloid infusion for the replacement of the blood volume may be given to a patient with an acute HMB episode which is causing anemia [19]. A randomized controlled trial reported that in 72% of the patients given intravenous [4, 17] estrogen, bleeding was stopped after two doses (over 12 h) compared with 38% of controls given a placebo [20]. For adolescents already using combined oral contraceptives (COCs) and admitted with HMB despite treatment, transition to i.v. treatment or higher dose COC are appropriate methods [16]. There is not enough data as yet to recommend one specific type of COC over any other [21].

Antifibrinolytics have the effect of halting the lysis of clots occurring at the end of the clotting cascade thus improving the clotting process. Antifibrinolytics have been reported to decrease bleeding in about half of the women with HMB and can be administered in combination with contraceptive methods [20]. Nonsteroidal anti-inflammatory drugs (NSAIDs) may also decrease HMB. Current studies have also shown that NSAIDs decrease menorrhagia in adolescents compared to placebo (600-1200 mg daily) [22].

Surgical management of adolescents with HMB is seldom necessary as more than 90% of them will respond to medical management [15].

The underlying etiology of the acquired obstructed cervix in the patient presented here is not as yet fully understood. Potential etiologies include progestin use, decreased uterine contractility triggered by high progestin levels, which might have prevented the effective removal of menstrual debris, and lastly, a possible partial obstruction causing massive uterine bleeding and drainage of bleeding around a solid obstruction. Decreased drainage of accumulated debris rather than acute hemorrhage may have caused hematometrocolpos.

Thus, the underlying etiology of the obstruction in this patient was uncertain, and this case denotes an unusual cause of acquired spontaneous hematometra and hematocolpos developed following progestin use.

Conclusion

Adolescents often present at gynaecologists with

HMB, although HMB following the usage of contraceptive pills which may cause hematometocolpos is rare. The diagnosis and treatment of this situation includes a careful physical, and ultrasonographic examinations, and laboratory tests to exclude other diagnoses such as bleeding disorders, anatomic and endocrine causes. Treatment methods include hormonal therapies, antifibrinolytics and nonsteroidal anti-inflammatory drugs, which are effective, well-tolerated and safe. This case shows that a careful history and examination is very important in the recognition of a rarely seen life-threatening menorrhagic episodes arising from usage of progestin with the intention to delay the menstrual cycle.

Informed Consent: Written informed consent was obtained from the patient who participated in this study.

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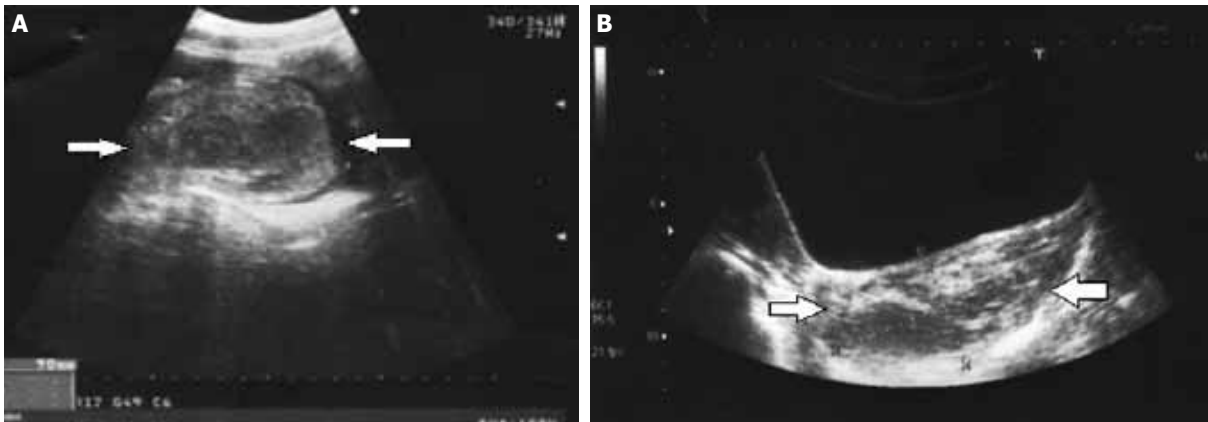


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