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Case Report
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Spontaneous Expulsion of A Fleshy Mass per Vaginum in A Peri-Menopausal Woman: "Decidual Cast" A Rare Presentation

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Abstract

Introduction: Spontaneous expulsion of a fleshy mass per vaginum in a peri-menopausal woman is an uncommon event. Differential diagnosis includes abortion, molar pregnancy, fibro epithelial polyp or uterine malignancy. Another exteremely rare diagnosis is "decidual cast".

Case report: A 42-year-old peri-menopausal woman presented with severe dymennorhoea and spontaneously expelled a fleshy mass per vaginum. UPT was negative and serum β-hCG were normal. Histo-pathologists opinion, finally confirmed the diagnosis of decidual cast.

Summary & conclusion: Spontaneous expulsion of fleshy mass per vaginum is a frightening symptom for any woman. In the absence of pregnancy, diagnosis is limited to fibro-epithelial polyp, uterine malignancy or decidual cast. Usually histo-pathology is the mainstay of diagnosis in such a scenario. In the absence of any prior progesterone treatment, diagnosis of decidual cast is difficult. Nonetheless, markedly decidualized stroma with attenuated endometrial glands is the hall mark for the diagnosis. Endometrial biopsy must be done to rule out any underlying malignancy.

Keywords: Decidual cast; Progesterone; Peri-menopausal woman

Introduction

Spontaneous expulsion of a fleshy mass per vaginumin a peri-menopausal woman is an uncommon event [1]. It raises many possibilities like abortion, molar pregnancy, fibro epithelial polyp or uterine malignancy [2]. Detailed history i.e. obstetrical history, medical history, menstrual history, or history of any drug intake is required to aid in confirming the diagnosis. Urine pregnancy test UPT), serum beta human chorionic gonadotropins (β-hCG) levels are required to rule out abortion or molar pregnancy. We hereby present a case of 42- year old peri-menopausal woman who presented with spontaneous expulsion of a fleshy mass per vaginum.

Case Report

A 42-year-old multiparous woman was admitted to the emergency department with complaints of severe dysmennorhoea since last three months. She reported severe debilitating pain during menses since last three months. Her menstrual cycles were regular (duration 30 days). She was a multiparous woman with two previous normal vaginal deliveries. There was no history of any drug intake. On examination, her blood pressure was 100/60mmHg and pulse rate of 90 beats per minute. Abdominal examination was un-eventful. On per speculum examination a "*fleshy mass*" (4*5*3 centimeters) was seen protruding through the cervix. It was partially expelled and was gently removed with forceps. Her abdominal cramps subsided immediately after passage of the mass. This fleshy mass resembled the uterine morphology on gross examination (Figure 1a). Her UPT was negative; serum β-hCG was within normal limits. Complete hemogram examination revealed mild leukocytosis (12x 10^9/L) with neutrophilia (80%). Pelvic ultrasonography revealed a normal sized uterus with endometrial thickness of 6mm. Bilateral ovaries were normal sized. On histo-pathological examination the fleshy mass demonstrated markedly decidualized stroma and attenuated glands. No chorionic villi or trophoblastic tissue was seen, thereby confirming the diagnosis of "*decidual cast*". Her subsequent clinical course was un-eventful. Her endometrial

biopsy was also done to rule out any uterine malignancy. She was discharged in healthy condition and is under close follow up till date.

Discussion

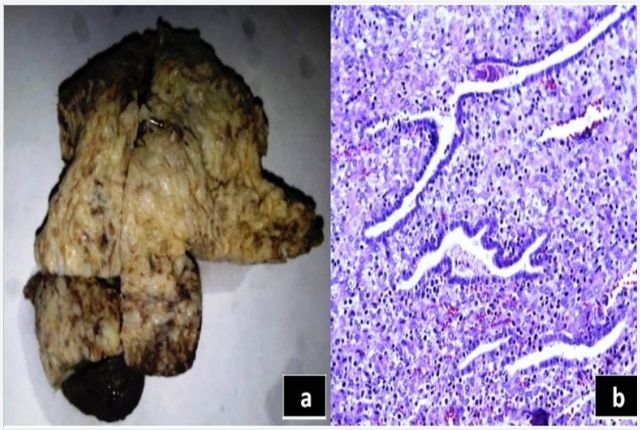

Figure 1: a) Gross examination of decidual cast expelled per vaginum. b) Histo-patholigical examination showing decidualized stroma and attenuated endometrial glands.

Spontaneous expulsion of voluminous fleshy mass in a peri-menopausal woman is a frightening symptom for the woman. Differential diagnosis can range from an innocuous diagnosis of an abortion to uterine malignancy [1-6]. It is an un-common occurrence (passage of fleshy mass per vaginum) and managing gynecologists needs definitive advice from pathologists regarding the confirmation of diagnosis. Differential diagnosis includes; abortion, molar pregnancy, fibro-epithelial polyp, or uterine malignancy [1-10]. UPT or serum β-hCG easily rules out abortion or molar pregnancy. In this scenario, histo-pathological examination of the fleshy mass is extremely important. On histo-pathological examination the fleshy mass showed markedly decidualized stroma with attenuated endometrial glands (Figure 1b). No chorionic villi were seen in the specimen. In such a scenario had chorionic villi been present, it would have supported the diagnosis of an intrauterine pregnancy. Sometimes, even in the absence of chorionic villi; an ectopic pregnancy may be associated with decidualization of endometrial stroma which may shed off as a cast. But, in the index case since UPT was negative and serum β-hCG was also normal, so the possibility of pregnancy (intra or extra-uterine) was ruled out. There was no evidence of any neoplastic changes in the tissue examined. However, endometrial biopsy was done to rule out uterine malignancy. Hence, a final diagnosis of "*decidual cast"* was given.

In the review of literature, limited case reports regarding "decidual cast" are available. To the best of our knowledge, 22 cases of decidual cast have been reported till date [1-16]. But in majority of them, decidual cast formation is associated with intake of progestational agents [1-6,8-16]. Spontaneous expulsion of decidual cast without any medical therapy is an extremely rare event. In our opinion, this is the first case reported of spontaneous expulsion of decidual cast in a peri-menopausal woman. Another similar case was reported in an adolescent girl [7]. This raises question mark against the favored hypothesis of pathogenesis of 'decidual cast" i.e., use of progestational agents in women with unopposed estrogen e.g. endometriosis, dysmenorrhoea or menorrhagia.

Additionally, decidual cast has been seen in the younger age group i.e., less than 20 years of age [(63.6%) i.e., 14 out of 22 cases reported. This might be due to hyper responsiveness of progesterone receptors in an immature uterus. Only 4/22 cases are reported in peri-menopausal age group (38- 52 years) and all these women were on progestational agents. There is no definitive pathogenesis for this condition yet and unfortunately, this disease is still known as the '*Disease of theories*'. Greenblatt et al. [2] proposed an infectious etiology supported by the micro-abscesses found in the tissue sample. In this particular case, the pathological examination of the tissue did not show any inflammatory cells to support the infectious etiology. Dallenbach - Hellweg [17] suggested the condition due to hyper-progesteronism. Progesterone is the primary decidualizing factor of endometrium. Studies have shown that progesterone brings about decidualization by acting on endometrial stromal cells through progesterone receptors [6,7].

There is excessive development of spiral arterioles in the decidualized stroma, with subsequent vasodilation followed by vasoconstriction. This leads to shedding of the thickened endometrial stroma. This hypothesis is supported by many cases reported before as majority of the cases were on exogenous progesterone therapy. Surprisingly, in our case there was no exogenous progesterone support. As progesterone is major underlying cause in decidual cast formation, in our case it might be because of any cause leading to endogenous production of progesterone. Increased endogenous progesterone production has been seen in conditions like corpus luteal defect, excess production of hypophyseal gonadotrophins, any ovarian malignancy, congenital adrenal hyperplasia or adrenal malignancy [17]. Any ovarian or adrenal cause was excluded in the index case. Further studies evaluating the serum progesterone levels in such patients and molecular studies to evaluate these decidual casts as compared to the casts formed during pregnancies are required to confirm the pathogenesis of this clinical entity.

There are myriad of possibilities in the differential diagnosis of spontaneous expulsion of fleshy mass per vaginum in a peri-menopausal woman. This case is being reported to highlight this clinical presentation and to make the managing gynecologists aware of this un-common presentation so as to pin point the definite diagnosis and offer standard of care to these women. Even though decidual cast formation in peri-menopausal women is a rare possibility, still it should be kept in the differential diagnosis of the fleshy mass expelled per vaginum.

Conflict of interest

There is no conflict of interest with any individual or organization.

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