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Case Report

Obstetrics and Gynaecology Section

Spontaneous Endometrial Cast Expulsion in Membranous Dysmenorrhoea: A Case Report

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ABSTRACT

Membranous dysmenorrhoea is a rare gynaecological condition characterised by the expulsion of the endometrium as a single intact cast that retains the shape of the uterine cavity. The authors report the case of a 36-year-old multiparous female who presented with a history of heavy and prolonged menstrual bleeding associated with the passage of tissue per vaginum for 7-8 months. She had a preceding history of amenorrhoea for six months and pregnancy was excluded. Clinical examination revealed expulsion of a membranous structure through the cervix; it was removed, resulting in immediate symptomatic relief. Ultrasonography (USG) demonstrated a thickened endometrium with no focal uterine or adnexal pathology. Histopathological examination confirmed the diagnosis, showing pre-decidualised endometrial tissue with dilated, congested vessels. The patient remained asymptomatic on follow-up over three menstrual cycles. Membranous dysmenorrhoea remains a poorly understood entity with limited reported cases, often associated with hormonal influences, though spontaneous occurrences, as seen in the present case, are uncommon. Recognition of this condition is important to differentiate it from other causes of abnormal uterine bleeding and to avoid unnecessary interventions.

Keywords: Abnormal uterine bleeding, Decidual cast, Exogenous hormones, Menstrual disorders

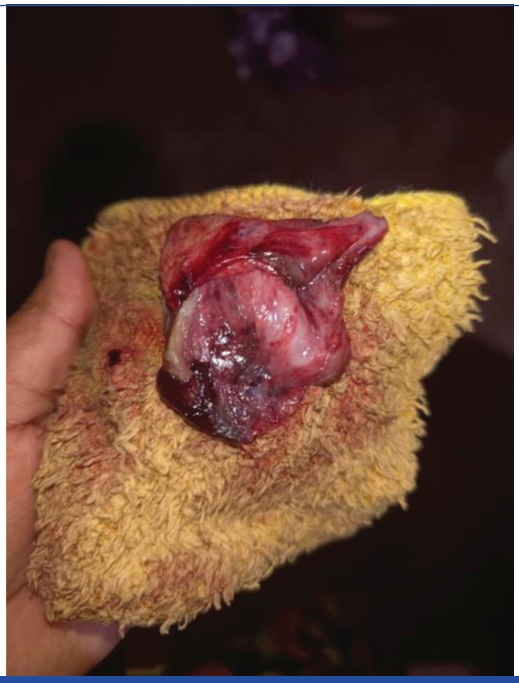
CASE REPORT

A 36-year-old multiparous female came to the Gynaecology Outpatient Department (OPD) with chief complaints of heavy and prolonged menstrual bleeding with passage of tissue per vaginum and lower abdominal pain of a cramping nature for the last 7-8 months. Before the past 7-8 months, the patient had experienced a period of amenorrhoea lasting six months. Pregnancy was excluded. There was no history of intermenstrual spotting, dysmenorrhoea, or abdominal mass. The patient denied vaginal discharge, backache, dyspareunia, weight changes, heat or cold intolerance and urinary complaints. The patient also gave a negative history of any usage of exogenous progesterone. Hormonal profile, including Thyroid Stimulating Hormone (TSH), serum prolactin, Follicular Stimulating Hormone (FSH), Luteinising Hormone (LH) and progesterone levels, was within normal limits. No history of use of hormonal contraception {Oral Contraceptive Pills (OCPs), injectables}, emergency contraception or any fertility treatments. No history of use of herbal/alternative medications.

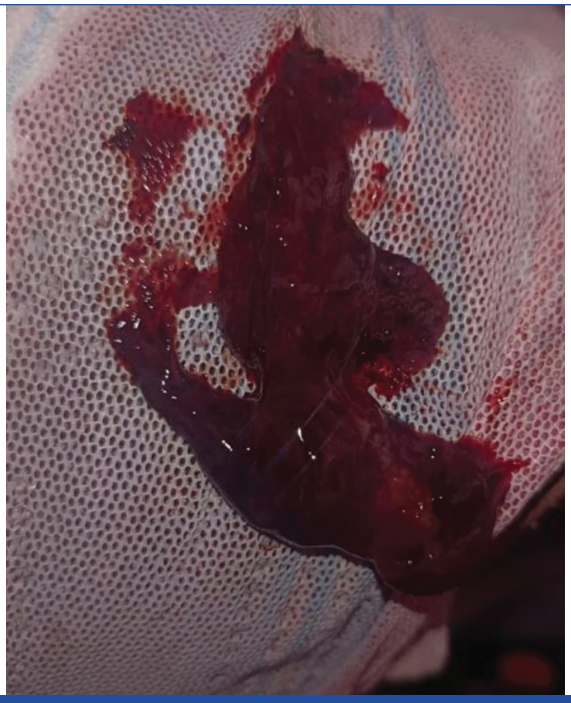
The patient had a parity score of Para 1, Living 1 (P1L1) with previous Lower Segment Caesarean Section (LSCS) in 21 years of marriage. It is a male child aged seven years with a birth weight of 2.5 kg. LSCS was performed at the maternal request. She had no known medical co-morbidities. On examination, her vitals were stable and her systemic examination was unremarkable. Her weight was 52 kg, with a body mass index of 19.6 kg/m^2.

In investigations her haemogram, electrolytes, urine and glucose profiles were normal. USG of the pelvis showed an endometrial thickness of 18 mm. The uterus was of normal size with no focal myometrial lesion. Bilateral ovaries appeared normal in size and morphology. No cystic or solid lesion was noted. No parametrial or adnexal mass was seen. Mild free fluid was noted in the pouch of Douglas.

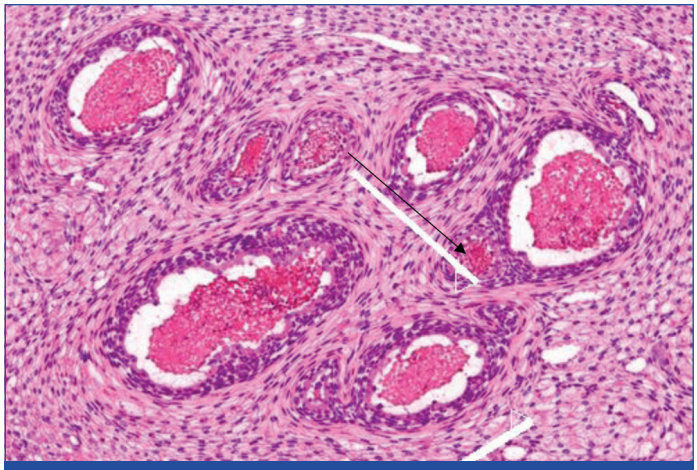
On local examination, the abdomen was soft and non tender. On per speculum examination, the cervix and vagina were healthy with traces of blood and expulsion of tissue (endometrial form) at the external cervix, which was removed with forceps. The expelled tissue measured approximately 5×5 cm, was reddish-brown in colour, soft to firm in consistency and resembled the shape of the uterine cavity [Table/Fig-1,2]. Upon removal of the tissue, the patient experienced pain relief. Histopathological examination confirmed features consistent with membranous dysmenorrhoea, demonstrating pre-decidualised endometrial tissue with dilated and congested vessels [Table/Fig-3]. The patient was started on Leuprolide acetate 3.75 mg administered via the intramuscular route once a month for the next three months, along with analgesics for pain relief. Patient



[Table/Fig-1]: Expelled endometrial cast measuring approximately 5×5 cm, reddish-brown in colour, resembling the shape of the uterine cavity.



[Table/Fig-2]: Endometrial cast visualised at the external cervical os during menstruation, with associated bleeding.



[Table/Fig-3]: Histopathological section showing pre-decidualised endometrial stroma with dilated congested blood vessels. The arrow indicates concentric perivascular stromal cell whorling around the vessels (H&E stain, ×400).

was discharged from the ward and was asked to return for review on a monthly basis at the OPD. She experienced no new episodes after three consecutive menstrual cycles. Therefore, the patient was asked to return to OPD as needed.

DISCUSSION

A decidual cast is the complete shedding of the endometrium in the shape of the uterine cavity, causing membranous dysmenorrhoea due to its passage through an undilated cervix [1]. It is a rare condition with an unclear pathophysiology. Proposed mechanisms include hormonal imbalance leading to incomplete endometrial breakdown and the possible role of integrins in cast formation [1].

The differential diagnoses considered included retained products of conception, endometrial polyp, submucosal fibroid and decidual reaction secondary to ectopic pregnancy. These were ruled out based on a negative pregnancy test, absence of focal lesions on USG and confirmatory histopathological findings of decidualised endometrial tissue without chorionic villi [2].

Sharmila V and Thirunavukkarasu AB (2019) reported a case of membranous dysmenorrhoea in a 36-year-old multiparous woman, who was not on any hormonal therapy. She presented with history of menorrhagia for 20 days and severe dysmenorrhoea for one day. During her second day of hospital admission, she expelled a fleshy mass resembling a decidual cast. Histopathological examination was consistent with diagnosis of membranous dysmenorrhoea [3].

This condition has been reported in women aged 20-40 years and in most of the reported cases, membranous dysmenorrhoea occurred while the patient was on hormonal therapy, such as Combined Oral Contraceptive (COC) pills or progesterone, or just after stopping hormonal therapy [4-6].

There is a lack of scientific evidence supporting the treatment modalities proposed for this condition, including progesterone therapy, androgen therapy, endometrial curettage, antibiotics and vasoconstrictors such as ergotamine [1]. The use of leuprolide for temporary endometrial suppression with no recurrence over three cycles aligns with the principle of hormonal suppression.

CONCLUSION(S)

Membranous dysmenorrhoea is a rare but important differential diagnosis in women presenting with the passage of tissue and severe menstrual bleeding or cramping. Recognition of its characteristic clinical presentation and confirmation by histopathological examination are essential to avoid misdiagnosis as retained products of conception or intrauterine pathology. Although hormonal fluctuations, especially those related to exogenous progesterone use, have been implicated in its pathogenesis, spontaneous cases such as the present highlight that the condition can occur even in the absence of hormonal therapy.

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