



Case Series

Decidual casts: Dilemma for clinicians, relief for patients – A case series

Bushra Siddiqui¹, Dipanjan Sinha^{1,*}, Nuzra Fazal¹, Shahbaz Habib Faridi²,
Mohd Talha¹

¹Dept. of Pathology, Jawaharlal Nehru Medical College and Hospital, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

²Dept. of Surgery, Jawaharlal Nehru Medical College and Hospital Aligarh Muslim University, Aligarh, Uttar Pradesh, India



ARTICLE INFO

Article history:

Received 05-08-2022

Accepted 10-10-2022

Available online 18-02-2023

Keywords:

Decidual cast

Passage of mass per vaginam

ABSTRACT

Decidua is endometrium that is hormonally prepared for pregnancy. Decidual cast is the entire sloughed endometrium that takes the form of the endometrial cavity. It is a rare entity which is the result of high progesterone on uterine endometrium. It has association with intrauterine pregnancy, ectopic pregnancy, incomplete abortion and in non-pregnant states with the use of hormonal pills etc. We are here presenting a case series of decidual casts. We observed that all our patients had a similar history of recent intake of hormonal contraceptives followed by bleeding and passage of fleshy mass from vagina. The differential diagnosis of passage of mass per vaginam includes conditions ranging from benign to malignant, therefore, our study emphasizes the importance of considering it in mind, since it mimics malignancy but is not a signal of a serious condition.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

1. Introduction

Menstrual disorders affect 75% of adolescent females.¹ Dysfunctional uterine bleeding is defined as abnormal endometrial bleeding without any underlying disease. It is particularly a common problem for adolescents. Whenever menorrhagia occurs at menarche and there is no response to hormonal therapy in 48 hours, there is a need for evaluation of coagulopathy.²

A decidua is endometrium that is hormonally prepared for pregnancy. Decidual cast is the entire sloughed endometrium that takes the form of endometrial cavity. It causes membranous dysmenorrhea because the intact cast passes through an undilated cervix. It may be associated with ectopic pregnancy, incomplete abortion as well as in non-pregnant states for example with the use of progesterone, depot medroxy progesterone acetate, rarely

with OCPs.³

Here, we present a 3 case series of this rare entity that must be remembered in the differential diagnosis of intrauterine masses in this age group.

2. Case Report

2.1. Case 1

A case was received in our department labelled as uterine/endometrial tissue. The specimen was from a 17-year old unmarried female. She had the complaint of lower abdominal pain and bleeding per vaginam for just one day with expulsion of a fleshy mass per vaginam. On pertinent history it was noted that she had a complaint of irregular menstruation and was on Ayurveda medications.

On examination, she did not have any other abnormality and palpation per abdomen was soft and non tender. USG revealed that she had a thickened endometrium with multiple antral follicles.

* Corresponding author.

E-mail address: dsinhamck@gmail.com (D. Sinha).

Grossly, two creamish brown soft tissue masses labelled as endometrial mass measuring 6 x 4.5 x 1cm and 8.5x 3.5x.8cms were received. Both the tissues had blackish areas on the surface. Multiple random sections were given from both the tissue pieces. (Figure 1)



Fig. 1:

2.2. On microscopic examination

H&E stained section showed only decidualised tissue along with atrophied glands, dilated and congested vessels and inflammatory infiltrate comprising of plasma cells. (Figure 2)

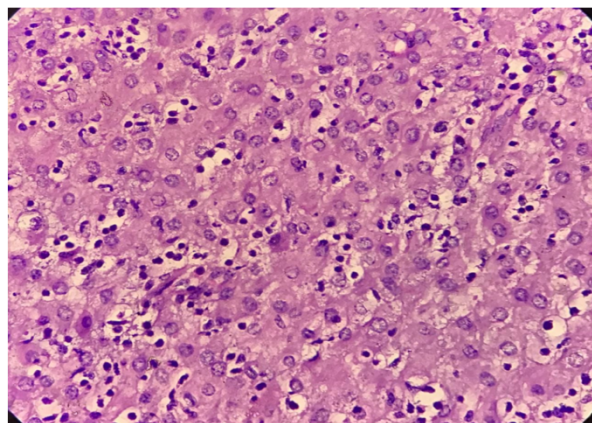


Fig. 2:

The report was signed out as Decidual Cast.

2.3. Case 2

A case was received labelled as endometrial polyp. It was from a 48-year-old woman who presented with the complaint of passage of a fleshy mass per vaginum. On further detailed history she revealed that she was taking oestrogen and progesterone for 20 days. She also had history of Copper T insertion 15 years ago.

2.4. On gross examination

A fleshy creamish white to tan coloured globular tissue was received measuring 16.5x 6x 2 cm. On cross section along the length, it was homogenous and white. (Figure 3)



Fig. 3:

2.5. On microscopic examination

H&E stained section showed decidualised tissue along with atrophic endometrial glands and dilated and congested blood vessels in the background of haemorrhage. (Figures 4 and 5)

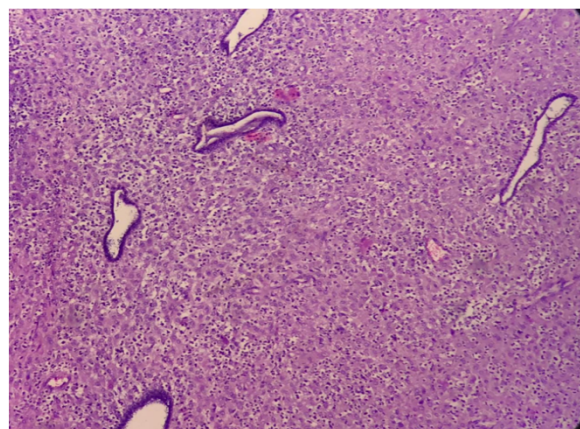
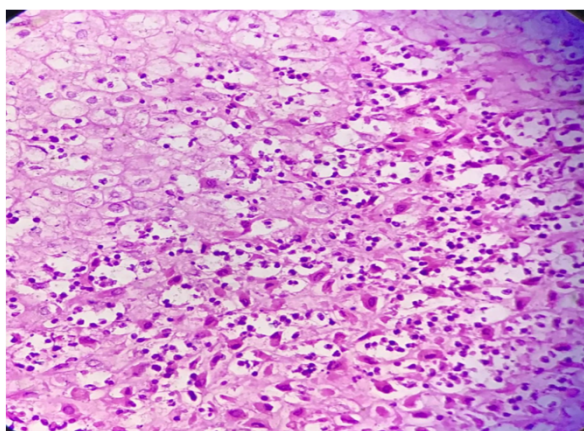


Fig. 4:

Again, the diagnosis of Decidual Cast was rendered.

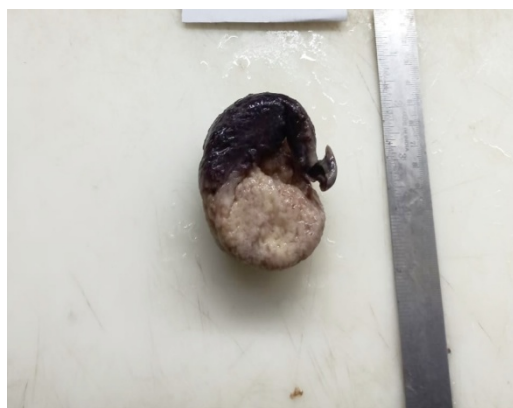
2.6. Case 3

Another case was received within a few days labelled as fleshy mass coming out per vaginum. The specimen was from a 14-year old unmarried female having a history of irregular menstruation. The USG revealed she had an endometrial thickness of 11 mm. Other examinations were unremarkable.

**Fig. 5:**

2.7. On gross examination

A membranous white soft tissue piece measuring 6x4x0.5 cm was received. On sectioning it was found to be honey combed cystic tissue with areas of haemorrhage and necrosis. (Figure 6)

**Fig. 6:**

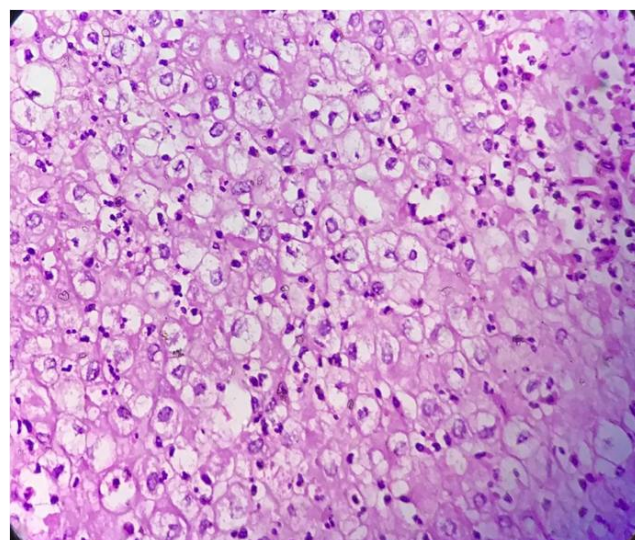
2.8. On microscopic examination

H&E stained sections showed sheets of decidualised cells along with attenuated glands, numerous congested blood vessels, spiral arterioles and acute inflammatory infiltrate. (Figure 7)

The report was signed out as decidua cast.

3. Discussion

Menstrual disorders are quite common among adolescents.⁴ During first 2 years; the menstrual cycle is often irregular. If menstrual irregularities persist for 2 years after menarche, there can be risk of adult menstrual irregularities and infertility.⁵

**Fig. 7:**

Decidual cast is a rare entity that has been reported through various case reports. It is an intriguing entity with no known pathophysiology till now. Theories ranging from an infectious process to increased production of estrogen and progesterone with incomplete disintegration of the endometrium resulting in a thickened endometrium which contracts and expels its contents.^{6,7} Other theories include the role of integrins which are adhesion molecules playing a role in development of decidua cast.⁸

There is no data regarding the incidence and prevalence of this entity also lack of description of this rare entity leads to it being commonly misdiagnosed or underdiagnosed.⁹

The differential diagnosis of passage of mass per vaginum includes myriad condition ranging from benign to malignant lesions such as aborted pregnancy, rhabdomyosarcoma, polyp and very rarely decidua cast. It is interesting to note that case 2 in our case report series that was received for histopathological examination was indeed labeled as endometrial polyp. This reflects that decidua casts can be a great mimicker and very difficult to consider as a diagnosis in elderly women. Indeed various reports indicate that decidua casts can be considered in women of 9-41 years who were using a hormonal contraceptives.¹⁰ All of our cases had irregular menses and had been prescribed hormonal OCPs.

Present case series show sheets of decidualised tissue in all of the H&E sections with dilated and congested blood vessels along with acute inflammatory infiltrate and notable absence of villi. It is common knowledge that formation of decidua tissue is due to progesterone along with a complex interplay of various other factors.

Our follow up of the three cases in this case series suggested that all the patients had an uneventful recovery. It is imperative that every woman should

have knowledge of the adverse effects of hormonal contraceptives. Along with the common side effects like nausea, vomiting, breakthrough vaginal bleeding¹¹ the diagnosis of decidual casts may be taught to women taking hormonal contraceptives for the first time.

4. Conclusion

Though rare in literature we received three cases of decidual casts within a span of 15 days in our department. So we conclude that in unmarried female patients, patients with previous pregnancies those had been suffering from irregular menstruation and had a recent intake of hormonal contraceptive followed by bleeding and passage of a fleshy mass per vaginum, the diagnosis of decidual casts should be kept in mind.

5. Source of Funding

None.

6. Conflict of Interest

None.

References

1. Torres A, Baszak-Radomska E, Torres K, Paszkowski T, Staskiewicz GJ, Wozniakowska E. A case of unusual course of adolescent menorrhagia: decidual cast as a side effect of treatment. *Fertil Steril*. 2009;92(5):1748.
2. Kanbur NO, Derman O, Aksu T, Ozsari M, Kutluk T. Menorrhagia at menarche: a case report. *Int J Adolesc Med Health*. 2003;15(2):161–4.
3. Jyoti, Kumari S, Kumar D, Gupta P, Gupta N, Kumar A. Recurrent decidual cast with membranous dysmenorrhea. *Int J Reprod Contracept Obstet Gynecol*. 2019;8(2):738–40.
4. Houston AM, Abraham A, Huang Z, and LJD. Knowledge, attitudes, and consequences of menstrual health in urban adolescent females. *J Pediatr Adolesc Gynecol*. 2006;19(4):271–5.
5. Apter D, Vihko R. Endocrine determinants of fertility: serum androgen concentrations during follow-up of adolescents into the third decade of life. *J Clin Endocrinol Metab*. 1990;71(4):970–4.
6. Asch RH, Greenblatt RB. Primary and membranous dysmenorrhea. *South Med J*. 1978;71(10):1247–9.
7. Greenblatt RB, Hammond DO, Clark SL. Membranous dysmenorrhea: Studies in etiology and treatment. *Obstet Gynecol Surv*. 1956;11(6):832–5.
8. Rabinerson D, Kaplan B, Fisch B, Braslavski D, Neri A. Membranous dysmenorrhea: the forgotten entity. *Obstet Gynecol*. 1995;85(5):891–2.
9. Oliveira PP, Eyng C, Zin RM, Menegassi J. Membranous dysmenorrhea - a forgotten disease. *Rev Bras Ginecol Obstet*. 2009;31(6):305–10.
10. Nunes RD, Pissetti VC. Membranous Dysmenorrhea - Case Report. *Obstet Gynecol Cases Rev*. 2015;2:42.
11. Wright KP, Johnson JV. Evaluation of extended and continuous use oral contraceptives. *Ther Clin Risk Manag*. 2008;4(5):905–11.

Author biography

Bushra Siddiqui, Assistant Professor

Dipanjana Sinha, Junior Resident

Nuzra Fazal, Junior Resident

Shahbaz Habib Faridi, Assistant Professor

Mohd Talha, Senior Resident

Cite this article: Siddiqui B, Sinha D, Fazal N, Faridi SH, Talha M. Decidual casts: Dilemma for clinicians, relief for patients – A case series. *Indian J Obstet Gynecol Res* 2023;10(1):99-102.