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Case Series

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

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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 vaginum 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.

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 coagulapathy.[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 vaginum for just one day with expulsion of a fleshy mass per vaginum. 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.

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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)

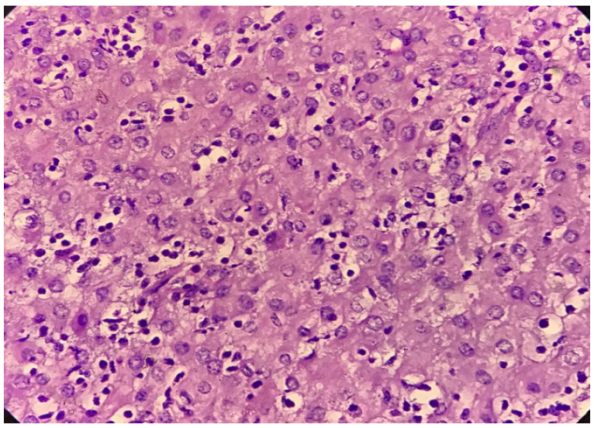

Fig. 2:

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)

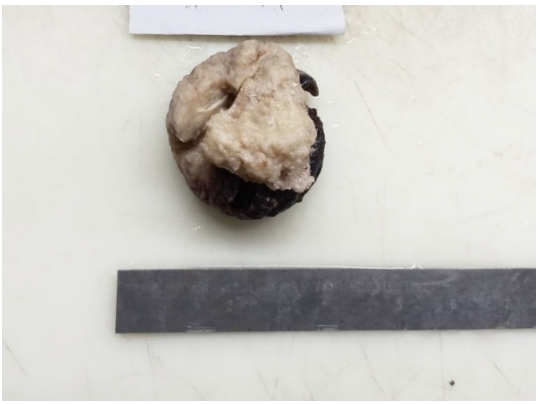

Fig. 3:

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)

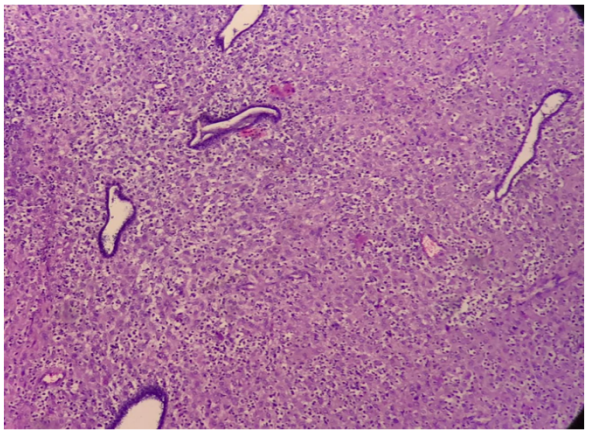

Fig. 4:

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.

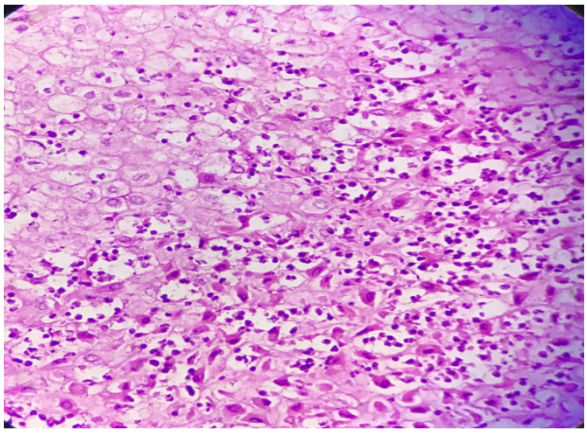

Fig. 5:

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 decidual 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]

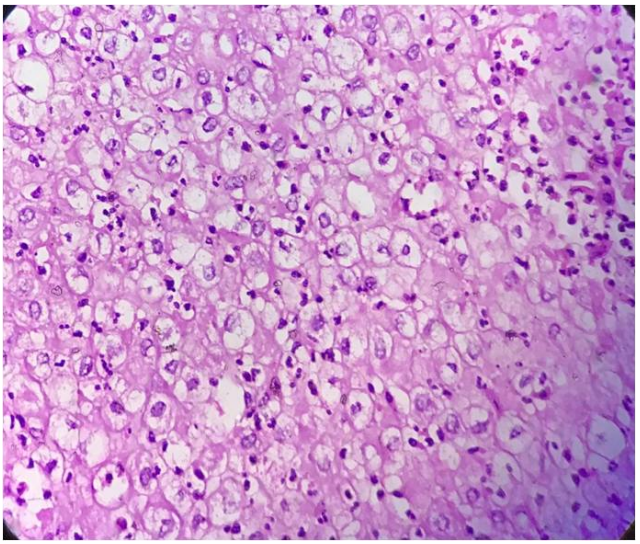

Fig. 7:

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 decidual 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 decidual 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 decidual casts can be a great mimicker and very difficult to consider as a diagnosis in elderly women. Indeed various reports indicate that decidual 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 decidual 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 bleeding[11] 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.

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6. Conflict of Interest

None.

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