Research Article

Endometriosis with decidual changes in omentum following pregnancy

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Abstract

Endometrial glands in the uterine cavity show decidual changes during pregnancy. Endometriosis can be observed in surgical scars, ovary, fallopian tubes and omentum. Similar to endometrium which shows decidualization in pregnancy, the ectopic endometrial tissue can also develop decidual change during pregnancy. 33 year old primi, who had Endometriotic foci in the omentum presented as hemorrhagic nodules, which was observed accidentally during caesarean section is being presented.

Keywords: Decidua, Endometriosis, Omentum.

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INTRODUCTION

Endometriosis is defined as the presence of endometrial glands or stroma or both in ectopic location which tend to respond to ovarian hormones in a manner similar to that of mucosa which lines endometrial cavity of uterus. Endometrial tissue during pregnancy undergoes decidual changes and same response is expected in ectopic pregnancy as well. In the present case where with normal pregnancy in the uterine cavity, the ectopic endometrial tissue in the omentum responded as decidualization. It was presented as hemorrhagic nodules.

CLINICAL HISTORY

33 year old primi presented with history of 9 months amenorrhoea following therapy for primary infertility, which was there for past 9 years. She was on treatment for hyperthyroidism until few months back.

On Examination: Abdominal wall was oedematous in nature. Uterus was found to be of term size. Per vaginal examination revealed 50% effaced cervix with a 2 cm dilated Os.

Ultrasonography: Uterus of size 34 weeks gestation was observed.

Operative Procedure: Emergency LSCS was done due to fetal distress. During the procedure hemorrhagic nodules were present in the omentum and were sampled for study.

The revised diagnosis of Endometriosis involving utero-vaginal fold of peritoneum and omentum was made.

MACROSCOPIC FINDINGS

Specimen of omental biopsy was received in the Department of Pathology, where a single fibro fatty tissue measuring 2 x 1.0 x 0.5 cm was present in the container. On cut section grey yellow, grey brown areas were noticed.

MICROSCOPIC FINDINGS

Section studied revealed omental tissue with sheets of brown coloured hemosiderin laden macrophages along with chronic inflammatory cells. Multiple nodules of decidua were also present. Few endometrial glands lined by single layered columnar cells were present. The final diagnosis of Endometriosis with decidual changes was made.

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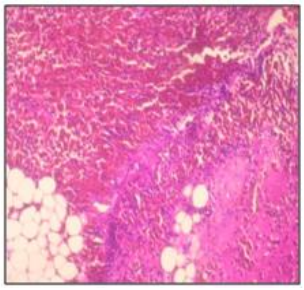

Figure 1A

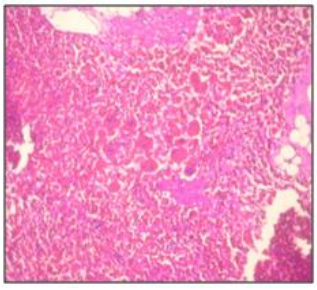

Figure 2

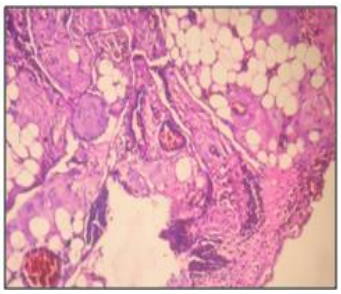

Figure 2A

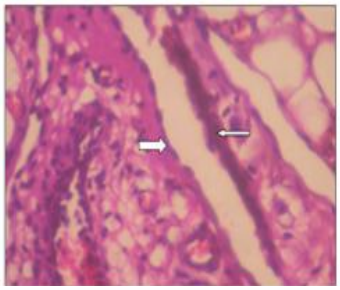

Figure 2B

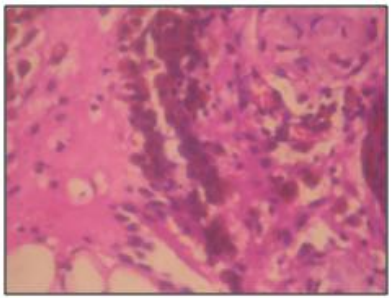

Figure 2 C

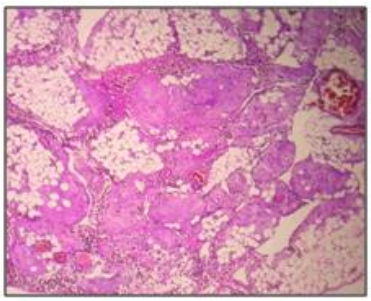

Figure 3A

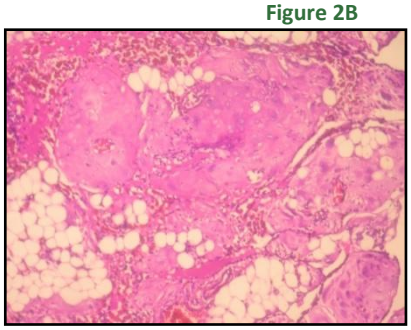

Figure 3B

Legend

Figure 1 A : H and E stained 4 x Sheets of brown-coloured hemosiderin laden macrophages along with chronic inflammatory cells
Figure 2 : H and E stained 10 x Inflammatory giant cells
Figure 2 A: H and E stained 10 x Omental tissue showing endometrial glands and deciduas
Figure 2 B: H and E stained 40 x Mesothelial lining of the omentum with metaplastic endometrial transformation
Figure 2 C: H and E stained 40 x Endometrial glands lined by pseudostratified columnar cells
Figure 3 A: H and E stained 10 x Decidua in the omentum
Figure 3 B: H and E stained 40 x Decidua in the omentum

DISCUSSION

The criteria for diagnosis of endometriosis are presence of two components-endometrial glands and its stroma. It occurs during reproductive years. The sites of involvement are usually the ovaries, uterine ligaments, peritoneum of bladder, recto-sigmoid junction, uterus and tubes, umbilicus, laparotomy scars, hernia sacs, appendix, vagina and vulva.[1] Various aetiological factors have been proposed like disturbance in ovarian hormonal function and deficiency in cellular immunity. Even genetic predisposition has been proposed. The various pathogenetic mechanisms for endometriosis that have been put forth include a) they originate in either Wolffian or Mullerian rests, b) retrograde menstruation resulting in regurgitation of endometrial fragments through fallopian tubes, c) Coelomicmeta plastic theory first proposed by Robert Mayer.[1] The Endometriotic nodules appear as tiny foci or as large cystic masses. These foci are often dome shaped and in dark bluish coloration whereas cysts are well encapsulated and show a thick fibrotic capsule along with numerous adhesions.[1] A definite histological diagnosis of endometriosis can be established only when both endometrial type glands and stroma are evident in ectopic sites. Cysts partially or completely lined by endometrial type epithelium, but lacking endometrial stroma are characteristic of endometriosis.[1] Endometriosis in women may be asymptomatic but most of them typically present with pelvic pain, infertility, or an adnexal mass. Classical studies have suggested that 25% to 50% of infertile women have endometriosis and that 30% to 50% of women with endometriosis are infertile.[7] Infertile women are 6 to 8 times more likely to have endometriosis than fertile women.[8] No mechanisms have been identified to explain the link between endometriosis and subfertility; however, several mechanisms have been proposed,[9] they are: Distorted pelvic anatomy,[10] Altered hormonal and cell-mediated function,[11] Endocrine and Ovulatory abnormalities,[12] Abnormal utero-tubal transport.[13]

Ectopic decidual Reaction

Ectopic decidual reaction is common in uterus, cervix, fallopian tubes and ovaries but other locations like appendix, omentum, liver, spleen, lymphnodes are rare.[2] Decidual reactions are usually asymptomatic; however rare life-threatening events have been reported which include hemoperitoneum,[3] obstruction in labour due to gross peritoneal deciduosis.[4] An ectopic decidual reaction is anexaggerated response of the endometrium to progesterone. Two theories have been proposed and the first theory states that sub-coelomic cells undergo a

progesterone-induced metaplasia, which is usually reversible and this is the most favoured theory.[5] The second theory states that decidual cells are already distributed in the peritoneum. Ectopic deciduosis of omentum is classified into the most common focal deciduosis and quite rare diffuse deciduosis. Grossly these lesions are visible as multiple, grey white, focally haemorrhagic nodules or plaques studding the peritoneal surfaces. Microscopic appearance reveals focal haemorrhagic necrosis with nuclear pleomorphism and hyperchromasia but lacks mitotic activity and the appearance is generally bland.[6]

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